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Illinois Medical Journal

OFFICIAL JOURNAL OF THE ILLINOIS STATE MEDICAL SOCIETY



PREVENTION and TREATMENT of Severe Insect Sting Reactions

Terumasa Miyamoto, M.D./Chicago

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Vomiting: In Geneva they have a word for it

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Illinois Medical Journal

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July, 1966

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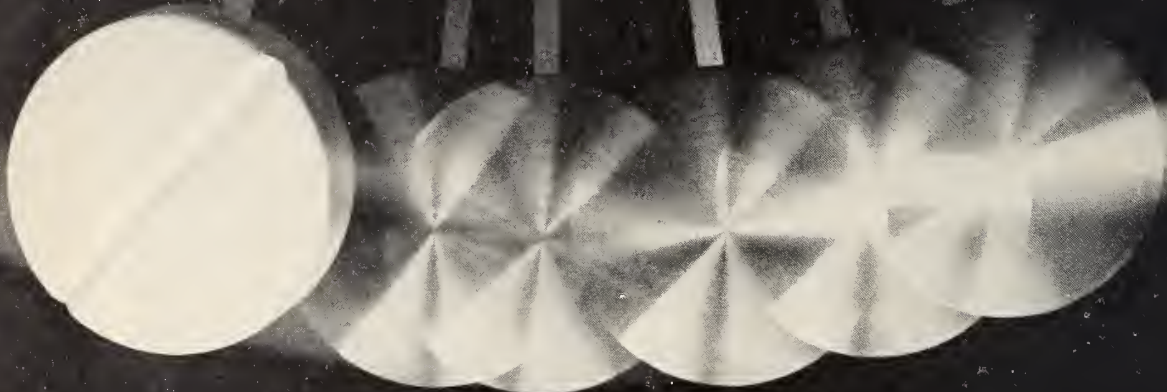
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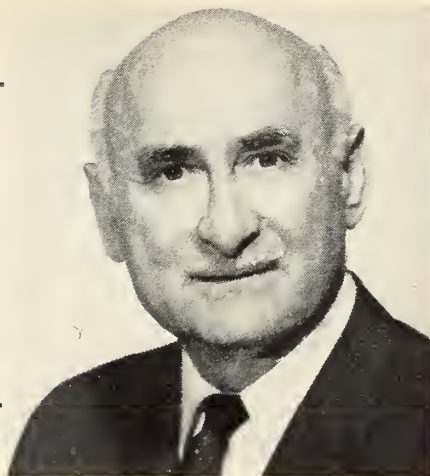
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The president's page



Caesar Portes, M.D.

THE IMAGE OF THE DOCTOR

(This subject is one of the 10 points in Dr. Portes' inaugural speech to which he will devote his attention during the coming year)

THE IMAGE of the doctor has changed in the past 20 years. It was not surprising to learn recently that not only the image of the organization of medicine, but also the image of the individual physician has lessened considerably. This was confirmed by the results of a public opinion survey undertaken by Opinion Research Institute at the request of the AMA.

A recent article in the *Time* magazine entitled: "Physician, heal thyself," stated that "nearly one billion visits are made to the U.S.'s 225,000 practicing doctors, or about five visits for every American. Each visitor expects not only medical care, but comfort, sympathy, relief, reassurance and solace. There was a day when he could be sure of getting all these: the day, not too far past, of the family physician, who often knew as much about his patient as he did about an illness. Today, Americans get far better medical care than ever before: as for the rest, they are often lucky to get as much as a hurried smile."

This criticism must be answered. I ques-

tion the validity of this statement. I maintain that the doctors of today are just as concerned about the patients as the doctor of years ago. That famous painting of the doctor sitting at the bedside of a little sick child in the dim light of the morning, disheveled, tired from a sleepless night, surrounded by anxious parents, that same picture can still be seen in many homes and in many hospital wards.

Today, the doctor does not have to sit all night awaiting the results. Many times, this was due to the fact that in those days we did not have modern facilities, equipment, and the medications that can be used today with better results. Today, this little child probably would be in the hospital with oxygen, festooned with tubes, with special nursing care, and all the other new and modern equipment. Today these children are saved that the predecessor would have lost.

Another complaint that we hear so much is concerning the increasing inaccessibility of the doctors. At night and on weekends, or holidays, few doctors—at least in the urban areas—are available. A quotation from Dr. Amos Johnson, President of the American Academy of General Practice,

... continued on page 60



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A TECHNIQUE FOR

IMPROVED VISUALIZATION

OF THE UMBILICAL VESSELS

*Harvey Kravitz, M.D./morton grove
and Rafael Molina, M.D./chicago*

THE EXAMINATION of the umbilical cord at birth is an important procedure because of the high incidence of multiple anomalies associated with a single umbilical artery.¹⁻⁷ The purpose of this study is to find a simple method of screening all umbilical cords to determine, by means of direct visualization, whether two or three umbilical vessels are present. No simple method of grossly visualizing the umbilical cord is currently being used. The only method that is available is the micro-tome sectioning of the cord, staining and visualization under a microscope.

Methods and Materials

Immediately after the birth a four inch section of the umbilical cords of 100 new-

borns were placed in bottles containing glacial acetic acid and left in solution for a period of 6 to 24 hours. The bottles were placed on their sides to prevent the blood from leaking out of the ends of the cord. The ends of each umbilical cord were inspected grossly for the number of vessels. The umbilical cords were also examined for the number of vessels by shining a light through the walls of each cord. The number of vessels seen by both methods were recorded. The consistency and color change of each cord were recorded.

Department of Pediatrics, Lutheran General Hospital, Park Ridge, Illinois.

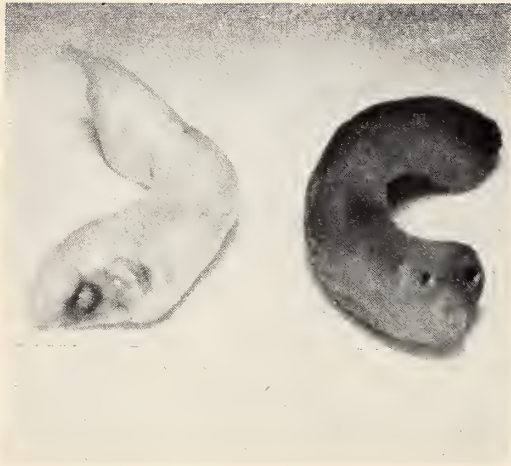


Figure 1

Figure 1: The appearance of an umbilical cord before and after being placed in glacial acetic acid.



Figure 3



Figure 2

Figures 2, 3 and 4: Three vessels can be seen at the cut end of the umbilical cord after treatment with glacial acetic acid.



Figure 4

Results

It was possible to identify on gross examination the vessels at the end of the umbilical cord in every case (Figures 1-4). The vessels could easily be seen in each cord when a bright light was shone through the body of each cord (Figure 5). The vessels contained a brown material resulting from the action of the glacial acetic acid. Each cord developed a firm rubbery consistency. The body of each cord changed from opalescent pink to a translucent amber color. The umbilical cords developed the above mentioned changes in three to 12 hours. The umbilical vessels were clearly present in all cases.

The vessels were distinctly larger in diameter after treatment with glacial acetic acid. The acetic acid lysed the red blood cells, which formed thick dark brown clots plugging the umbilical vein and the arteries.

No umbilical cords with a single umbilical artery were found in this small series of cases.

Discussion

The advantage of this procedure is its simplicity and rapidity. The umbilical cords can be inspected once a day by an intern or resident and the result can be recorded. This method allows for the screening and early detection of cases of single umbilical artery so that newborns with this condition can be studied before they are discharged from the hospital. When cutting the fresh ends of the umbilical cord, doctors are often unable to see the vessels with absolute certainty. Cords treated with glacial acetic acid are easily seen and can be accurately reported.

Summary

A technique has been described for rapid screening of umbilical cords of newborns for detection of cases with a single umbilical artery.

Acknowledgment

The author wishes to acknowledge the assistance of Alan Green, M.D. and Bernard Greenwald, M.D., Skokie.



Figure 5: Three vessels can be seen when bright light shines through the umbilical cord.

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PREVENTION AND TREATMENT OF SEVERE

STINGING INSECTS are many in number. In this presentation, I wish to limit my discussion to stinging bees since they are the most common and important stinging insects. Before I get into the discussion of prevention and treatment, I wish to mention briefly the mode of life of bees, the chemical and immunologic studies of bee venom and human sera and clinical reactions due to bee stings. The most primitive bee appeared in fossil records around 200 million years ago and the first record of death due to a stinging insect in 2641 BC is shown by the picture on the tomb of an Egyptian King who apparently died from a wasp sting. Although there are many species of Hymenoptera, it is usually the social bees and wasps which sting humans. Bees and wasps belong to the class Hexapoda, order Hymenoptera. Bees belong to the Aphid family and wasps to the Vespidae family. While there are many species of both, the honey bee, paper wasp, hornet and yellow jacket are commonly encountered species. Honey bee hives may contain as many as 50,000 inhabitants and the worker bees will attack promptly if the colony is threatened. The wasp builds small, open-bottomed comb-type nests under eaves and in other open but protected areas. The hornet builds the large, gray, football-shaped nest often seen hanging from the branches of trees or bushes. These nests contain as many as 10,000 wasps who pour out in large droves at the threat to their colony. They are easily provoked. The

yellow jacket, so called because of the yellow bands on its body is probably the most frequently encountered since its nests are just under the ground or on the ground near old logs. They are, therefore, easily disturbed when cutting a lawn or when planting, and they attack promptly when excited.

The first study of bee venom appeared in the literature in 1833. It was found that venom is bitter to the taste, soluble in water but not in alcohol and that it evaporates to form a tenacious gummy residue. Current studies have identified the following in venom: formic acid, 5-hydroxytryptamine, hyaluronidase, histamine, acetylcholine, kinin and phospholipase A. Thus, bee venom contains various chemical mediators with potent biological activity. The weight of venom sac is around .8 mg. Consequently, the total amount of chemical substance contained is not large in amount. The amount of venom injected by a bee sting has been estimated around .1 mg. Therefore, it is considered that even if bee venom is injected directly into a vein by a single bee, the amount is probably not enough to cause fatal reaction.

Allergy and Immunology

In recent years, considerable attention has been directed to the bee sting reaction from the view of allergy and immunology, which includes studies in antigenic characteristics and anaphylaxis-producing abili-

INSECT STING REACTIONS

Terumasa Miyamoto, M.D./chicago

ties of the various bee venoms, and the antibody in human serum. Immunologic studies are in progress by several investigators at the present time. The head and neck are the most frequent sites to be stung. The next most common site is the feet, followed by the hand. Mild local reactions with pain, redness and swelling at the site of stinging are due to the reaction caused by chemical substances in venom. It is believed, however, that severe local reactions or the systemic reactions following a single sting is an allergic reaction. Manifestations of generalized systemic reactions may include severe local reactions, urticaria, nausea, vomiting, chills, fever, wheezing, dyspnea, angioedema, involuntary defecation and urination, shock, unconsciousness and death. These symptoms usually start within few minutes, occasionally few seconds after bee sting. Sometimes local reaction, urticaria, joint swelling and pain, lymphadenopathy and elevation of temperature may start one to two weeks after a bee sting. These symptoms are those of serum sickness type of reaction. The necropsy findings after anaphylaxis may show pulmonary emphysema, cerebral edema, fatty metamorphosis of the liver, dilatation of the heart, epicardial hemorrhage, cerebral intraventricular hemorrhage, angioedema of throat and cutaneous petechiae. According to reports, more than twenty deaths may be attributed to the bee sting each year. This figure is about 40 percent of total deaths

due to stinging animals and is higher than fatal reactions due to snake bite. If we consider the possibility that sudden deaths of uncertain etiology could be due to bee sting, the actual incidence of death caused by bee sting anaphylaxis would be much higher than the official figure.

Discretion the Best Prevention

The best prevention of severe reactions is obviously the avoidance of being stung. The possibility of being stung can be reduced by taking certain simple precautions. Patients with a history of reactions to stings should be especially careful to avoid being stung. Since perfumes, hair spray, hair tonic, suntan lotion and many other cosmetics may attract insects, these substances should not be used when there is possibility of being exposed to bees. Floppy clothing in which an insect might become caught, bright colored clothes, flowery prints, and black clothes should be avoided. Light colors such as white, green or tan apparently do not attract or antagonize bees. Any sort of food attracts the bees. Outdoor cooking or eating, feeding pets out of doors, garbage cans dirty on the outside will attract bees. Meticulous cleanliness about the garbage area and repeated spraying of patio and garbage cans with insecticide will tend to keep insects away. Gardening should be done cautiously. If there is a nest around the home, it should be removed or destroyed carefully. Such

operation can be done best in the night. A patient who has previously experienced severe reaction to bee sting should carry an insect sting kit containing isuprel sublingual tablet, oral antihistamines and isuprel nebulizer with a physician's instruction for immediate self treatment. A honey bee leaves its stinger in the skin after stinging. Since it takes two to three minutes for the venom sac to inject all the venom, instant removal of the stinger and sac will prevent many of the harmful effects of the venom. This can be done with one swift scrape of the finger nail. The sac should not be picked up between the thumb and forefinger because this squeezes in more venom. The hornet, wasp and yellow jacket which do not lose their stingers should be brushed off promptly. The treatment of the systemic allergic reaction—a tourniquet should be placed proximal to the site of the sting if possible and epinephrine 0.3 ml of 1:1000 dilution should be given subcutaneously above the tourniquet or other side of extremity. 0.3 ml of epinephrine should be given at the site of a sting if site is known to delay absorption of venom antigen. An antihistamine should be given by mouth or parenterally. Epinephrine should be repeated 15 to 20 minutes interval depending upon the response of the patient. For shock an intravenous fluid with hypertensive agent is necessary. For angioedema, tracheotomy may be necessary. Severe wheezing and shortness of breath may necessitate the use of oxygen and intravenous aminophylline. Artificial breathing and cardiac massage should be employed without hesitation if it is needed. Adrenal cortical steroids can be used, but an immediate response cannot be expected from these.

Treatment of Serum Sickness

Treatment of serum sickness type of reaction is identical to the treatment of serum sickness. Antihistamine or ephedrine for skin itching and aspirin for joint pain are used. Gratifying results may be obtained with the use of steroids. The long range treatment to prevent recurrence of severe reac-

tions is hyposensitization treatment. There has been some discussion as to whether extracts from venom sac or whole body are the most satisfactory for hyposensitization treatment. At the present time, most authorities favor the whole body extract. Before the initiation of hyposensitization treatment, skin tests should be done carefully with very diluted extracts to determine the end points of reactivity. Since systemic reaction has been reported with an intracutaneous skin test using a 1:1,000,000 dilution it is best to start skin testing from 1:100,000,000 dilution or more and should be carried out carefully. It is also good policy to do a scratch skin test preceding an intracutaneous skin test. Hyposensitization treatment is usually started at the strength giving a slight reaction to the skin test. The patient should be kept in the office for 20 minutes after an injection for observation. The amount injected is gradually raised twice a week or at weekly intervals until a significant local reaction occurs. After this maintenance dose is reached the interval of injection may be given every two to three weeks, and eventually every four weeks and the injections should be continued indefinitely.

Results of Hyposensitization

Recently, the Insect Allergy Committee of American Academy of Allergy reported the result of hyposensitization treatment. Their results demonstrated that 90% of hyposensitized patients who are still being treated showed less reactivity after subsequent stings, and 56% of nontreated patients improved. Four percent of hyposensitized patients continuing treatment appeared worse and 3% of hyposensitized patients who stopped treatment were worse. In contrast, 13% of non-hyposensitized patients were worse after subsequent stings and 31% had reactions similar to the initial reaction. Hyposensitized patients had similar reactions in 6% to 8% of the re-stings. These results suggest that the patient with bee sting allergy should be treated with hyposensitization injection whenever it is possible.



THE VIEW BOX

Leon Love, M.D.
Director, Diagnostic Radiology
Cook County Hospital

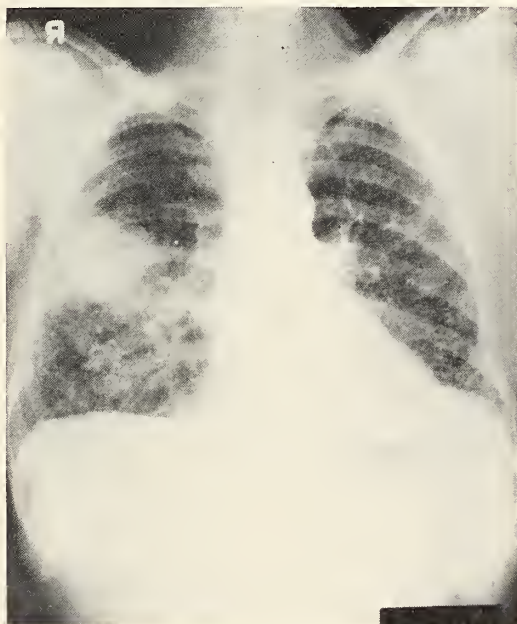


Figure 1, Case I

This 72-year-old, white male entered the Cook County Hospital Radiation Center, having been referred to the clinic by an outside physician. He had been in reasonably good health until one year prior to his admission, when he experienced a cough which was intermittent in nature and productive of occasional blood tinged sputum. He had lost 10 lbs. in a year's time. He had smoked two packages of cigarettes daily for the last 50 years.

Physical examination revealed a chronically ill, poorly nourished patient. Dry rales were noted in both lung fields with an occasional inspiratory wheeze.

What is your diagnosis?

1. Carcinoma of lung with metastasis
2. Cardiac decompensation with pulmonary edema
3. Pneumoconiosis
4. Far advanced TBc.

(answer on
next page)

THE VIEW BOX

(continued)

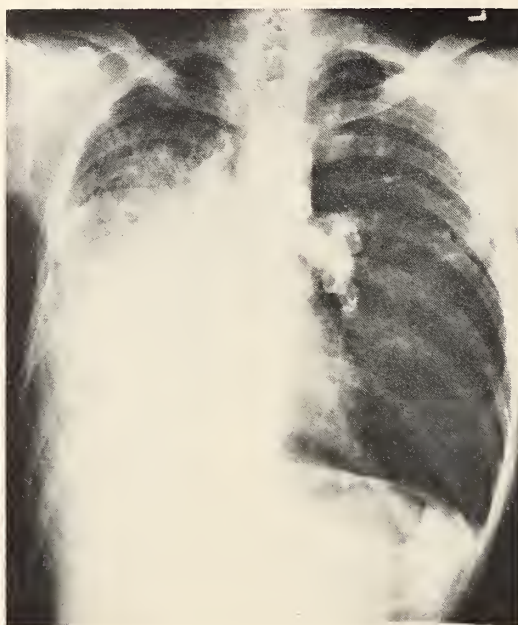


Figure 2, Case II

Diagnosis: Pneumoconiosis

The diagnosis of pneumoconiosis is far less difficult if one keeps in mind the radiographic features which can occur in this condition. With this in view, the patient's occupational history is then the deciding factor in making a diagnosis. Our patient worked in a hard coal mine for 15 years. Investigation revealed that his chest X-ray was unchanged from a chest film taken five years earlier.

Early in the course of the condition multiple small nodular densities 2-6 mm. in size distributed along and between the vascular channel and the bronchial tree will be seen. Gradually coalescence of the lesion will occur and can grow to a huge size (Figure 1). Bilateral upper lobe coales-

cence may give the appearance of so-called "angel's wing." The massive conglomerate shadow consists of an extensive fibrous matrix surrounding silica particles. They are sometimes associated with superimposed inflammatory disease, particularly tuberculosis. The peculiar peripheral distribution of calcification in the hilar nodes is characteristic and is referred to as "egg shell" calcification.

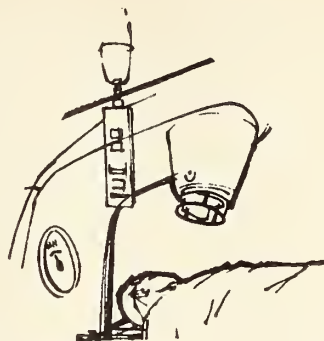
Case II, Figure 2 demonstrates this finding in a patient who also had a bronchogenic carcinoma in the right lower lobe.

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Medical Progress

Harvey Kravitz, M.D./progress editor



CURRENT TRENDS IN CHILD PSYCHIATRY

Jeanne Spurlock, M.D./chicago

AS IN OTHER MEDICAL SPECIALTIES, the pattern of the practice of child psychiatry has been affected by external, as well as internal, changes. The continued advances in the obstetrical and pediatric specialties and the national focus on mental health are two major contributing factors to the increase in the need and demands for child psychiatry services. With improved therapeutic measures, more pregnancies are carried to term after early signs of threatened abortion. The survival rate of premature infants continues to rise, and a greater rate of recovery is observed of children stricken with illnesses which were previously fatal. Although these medical crises often result in the normal development of many children, the survival of others is coupled with a chronic physical disability, a disability which becomes compounded by psychological problems when the child and/or parents are unable to cope effectively with the limitations of the child. The national concern about mental health needs of children is reflected in recent legislative

action—especially the Community Mental Health Centers and the Child Mental Health Bills. The concern is also evidenced in numerous studies, of a variety of problems, in local communities. Three indisputable conclusions have been consistently drawn: (1) There is an acute shortage of mental health professionals to care for children already diagnosed as mentally ill; (2) there is an alarming shortage of treatment facilities; and (3) the need for greater knowledge about preventive measures and methods of implementation.

A perusal of child psychiatry literature of the past year illustrates the efforts that have been made in the direction of meeting some of the overwhelming needs. Some of the current trends in the field, especially in the area of therapy, have been described as new developments by some clinicians; identified by others, as a return to previously used practices.

Having partial roots in the child guidance movement, child psychiatry has always been concerned with the child's

family and the community in which the family lives. The child guidance movement, which had its inception in the work of Dr. William Healy in the early 1900's, made use of the interdisciplinary team. This approach has been described as reflective of the work of Ernest Southard, in the area of social psychiatry, and the psychobiological concept, as advanced by Adolph Meyer (sometimes identified as the "prophet" of community psychiatry). The introduction of psychoanalytic theory brought about a focus on the psychic life of the child and his parents, a focus on emotional conflicts and defenses established as a means of coping. The resulting modification in treatment methods brought about the emphasis on a more intensive therapy for the child, as compared to the earlier guidance methods, which were primarily directed to altering the external environment. Yet, child psychiatry, which Solnit has described as "a child-centered form of family psychiatry"¹⁶ has continued to be intimately related to a number of child guidance practices.

Training and Professional Activities

An assertion has been made that "setting of training provides and exercises an influence on the trainee somewhat comparable to his own family culture." It was further suggested that training centers based in "clinics and community oriented facilities tended to produce specialists interested predominantly in those areas, while medical schools and other facilities oriented to teaching and consultation to other medical groups similarly produce specialists interested in those areas."³ Repeated surveys have shown that relatively few child psychiatrists are in full time private practice. A summary of the results of a 1964-65 survey conducted by the Chicago Council of Child Psychiatry is illustrative. Of 53 board certified, or board eligible child psychiatrists in the greater Chicago area, 49 were in private practice; 2 were in full time academic positions; 1, full time in research; 1, full time in an institutional setting. None of the 49 was in full time practice; 48 of this number

were actively engaged (as consultants) in a community service program, or in a child psychiatry training program.

Approved child psychiatry training takes place in a variety of settings—hospitals, medical schools, children's psychiatric clinics, community clinics. In the medical school and hospital based training center, developmental neurology lectures and pediatric liaison activities are an integral part of the training program for child psychiatrists. As previously indicated, the teaching of psychoanalytic concepts is included in most training programs. Regardless of the setting, the training programs are intimately related to psychiatric social service and psychology. In many facilities, supervised clinical experience is provided for general psychiatry residents, pediatricians, nurses, occupational therapists and teachers. Thus, the child psychiatrists who staff these programs are involved in teaching trainees from several professional groups; providing training for child therapists, as well as training for those who, in the course of practicing their specialty can promote specific mental health measures. In a report of a series of seminars with hospital staff pediatricians, Coppolillo has focused on methods of giving anticipatory guidance to the troubled parent.⁴

"Teacher-Moms"

In addition to participation in community programming which is an integral part of a child psychiatry training program, clinicians serve as consultants to numerous community agencies. During the past year there has been, in many communities, an increase in the request for psychiatric consultation service in the public schools. A program set up in the East, by a child psychiatrist and a school superintendent, won the American Psychiatric Association's Silver Award last year. The consultantship was divided between diagnosis of children thought to be in need of special class room placement, and counsel for teachers. Aware of the disturbed child's need for one-to-one relationships, and in the face of teacher shortages, the innovators

of this program were successful in implementing a plan for the use of volunteers, identified as "teacher-moms." Nearly all of the 40 children demonstrated improvement; more than half were able to return full-time to regular classes at their proper age-grade level. In such a program educational objectives are paramount; psychiatric care, for child and parent(s) is most often indicated and family is appropriately referred.⁶

Group Therapies

An increasing emphasis has been placed on family interviewing as a diagnostic and therapeutic tool. The value of this approach has been based on the findings that disturbances in the child may be symptomatic of parental problems, and that some family interactional patterns are more quickly identified through the family approach. This method of treatment, used in many psychiatric facilities, has included pre-school children as well as the older child.¹⁸ Ideally, during the course of the therapy the pathological interaction is alleviated, freeing the child to master normal developmental experiences.

Family therapy has been hailed by some therapists as that treatment procedure that will resolve all problems within the family. Others, although proponents of the use of family therapy, caution that individual treatment should not be excluded as indicated or preferred.¹⁰ Not infrequently, it is immediately determined that one of the goals in family therapy is the preparation of a family member for individual treatment.

Group therapy procedures have been introduced in a number of clinics. Frequently this treatment approach has developed from a research project. Speers and Lansing, from the University of North Carolina, reported the results of a study of the feasibility and effectiveness of group therapy in the treatment of young psychotic children and collateral treatment of parents. As in other therapy programs with groups, (1) treatment of the whole family is emphasized; (2) the value of subsequent individual therapy is underlined,

and (3) other disciplines are valuable, and necessary, active participants.¹⁵ Some facilities have utilized the group therapy approach as an alternative, or intermediary, therapeutic measure to institutional care. The low frustration tolerance of the psychotic child, and his immediate need for gratification makes necessary a highly structured therapy program. A number of techniques have been used in the efforts to promote a sense of self and to dilute the child's defensive behavior of externalizing a conflict into a battle. Therapists have found the use of a tape recorder or dictaphone as a successful vehicle in promoting the verbal expression of feelings, and in helping the child develop awareness of experiencing a feeling (talking about what he was feeling in contrast to acting out the feeling). This therapeutic program has not produced cures, but has been successful in readying children to be accessible, because of improved ego functions, for individual therapy and to better adjust to their external environment.⁸

Special Needs of Some Children

Modifications of therapeutic procedures have been introduced in the treatment of the organically damaged child. Karlander and Colodny have identified some intractable disturbances as expressions of biological dysfunction. A specific treatment approach included (1) medication, to suppress the symptoms of hyperactivity, not as a substitute for management or insight; (2) perceptual re-training; (3) physical exercise that assisted the child in awareness of himself in time and space; and (4) psychotherapy of an instructional nature, with emphasis on the reviewing of the damaged self image; point out old patterns and building new ones.⁹ Much of one issue of the *Journal of the Academy of Child Psychiatry* was devoted to a report of a symposium, "Children Without Families." As noted by the editor, life experiences have so damaged many of these children that psychiatric planning is a necessary part of wise total planning for their care. A serious concern reported was that of the poor results of long-time foster home care.

Ideally, foster home placement for these children should be used, not by default of other services, but as one aspect of health and welfare services. Comprehensive mental health programming was strongly supported. The need for intensive research, psychoanalytic study of individual cases to investigation of the "relationship between the specific traumata of early childhood to later disturbances of function" was recognized.¹

Treatment of Specific Disorders

The child psychiatrist's continued interest in dynamic considerations and treatment of specific disorders is evidenced in recent publications. Norton has written of therapeutic techniques for the successful treatment of catastrophic reactions, phenomena which were observed to occur after any type of severe body injury with residual damage.¹¹ Sperling has suggested that "the majority of physicians have not yet accepted enuresis as a symptom based on psychopathology and indicative of personality disorder." She reminds the reader that this symptom is the "(mis)-use of a normal physiological function for psychological reasons, namely, for the gratification of instinctual needs of a sexual and aggressive nature." The aim of treatment is that of helping the child to develop instinctual control. Dietary restrictions and mechanical devices are respectively identified as of no value and psychologically harmful.¹⁷ Elson, et al, reported milieu therapy as the most effective approach in the treatment of elective mutism.⁵ Malmquist identified school phobia as a problem in family neurosis.¹⁰ Affeldt and Wilson recommend early hospitalization of the school-phobic adolescent as the treatment of choice.²

Research

Research activities have covered a broad spectrum. Wortis and Freeman investigated the relation of social environment to the development of premature children. It was determined that the greater degree of deprivation experienced by the mother is associated with an increased possibility of neurological abnormality in the child. Poor

environment appeared to have an exacerbating effect where there was some existing deficit. The authors pointed to public health implication—extremes of poverty are linked with increased susceptibility of children to neurologic abnormality and mental defects.²⁰ Findings of Pavenstedt's comparative study of child rearing practices of two sub-groups of lower class families is of significant importance in the establishment of compensatory educational programs. Even without intellectual stimulation, children from stable upper-lower class families evidenced normal personality development which permitted them to adjust and learn in the first grade, as compared to children from the lower-lower class families.¹³ Fish, et al reported the results of a longitudinal study regarding the prediction of schizophrenia in infancy. The investigators concluded that a child's ultimate personality organization is dependent upon how the child's biological pattern of assets and impairments interact with his environment.⁷ Coles and Brenner have written extensively of their consultative experiences with college students who worked with the Mississippi Summer Project. Among the students they observed a "wide range of personality types. Largely absent were the psychotic, the sociopathic or psychopathic." During periods of very real danger, the students utilized a variety of defenses to "ward off the fears and tensions of near battle line situations." For example, through the mechanism of displacement they focused concern over minor details of their teaching or daily life activities.²¹

Diversified Treatment Programs in Clinics

This cursory review of the literature does not, of course, give a complete picture of the various aspects of the total picture of child psychiatry. The author's membership on the Maintenance of Membership Standards Committee of the American Association of Psychiatric Clinics for Children has provided contact with facilities throughout the country. The staff of these facilities are constantly alert to developing ways and means to expand serv-

ices and, at the same time, attuned to the maintenance of standards. In addition to services previously described, many facilities have added programs of day-treatment, treatment for the brain damaged and retarded child with emotional problems, and children with delinquency patterns. Child psychiatrists have become more involved in consultative activities with state hospital programs and community health programming during the past year.²³ Recognizing that the manpower needs will probably never be met, more attention is being directed toward preventive measures with joint efforts of other professional groups.²² At the 1964 conference, co-sponsored by the American Psychiatric Association and the American Academy of Child Psychiatry, held for the purpose of formulating principles and guidelines for planning psychiatric services for children in community mental health programs, it was pointed out that "all the conditions which impinge on the healthy development of the child cannot be the direct concern of psychiatric services for children."¹⁴ However, aware that emotional illness is often rooted in conditions as slum housing, poverty, cultural deprivation, broken homes and discriminatory practices, many child psychiatrists, through consultative services to community agencies, are promoting factors that influence healthy personality development and, hopefully, contributing to preventive measures.

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**PULMONARY
TUBERCULOMAS
SIMULATING
METASTATIC
HYPERNEPHROMA:
REPORT OF CASE**

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PULMONARY METASTATIC lesions from a primary renal site are often few, bilateral, and large (so-called cannonball tumors). The appearance of cannonball tumors in the thoracic roentgenogram signifies an ominous development in most instances; but herein is reported a case of pulmonary tuberculomas that simulated metastatic hypernephroma but that were not considered benign lesions, because of their large size.

Report of Case

A 69-year-old pharmacist was seen at the Mayo Clinic for the first time on January 11, 1965, because of left abdominal and flank pain associated with a loss of 12 lb. He had had diabetes mellitus for 13 years, which was controlled fairly well with 60 units of U-80 lente insulin. He had complained of increased fatigability for 6 months, but no symptoms referable to the chest.

On physical examination he appeared well preserved for his years. There was a grade 2 (on the basis of 1 to 4) systolic murmur over the aortic area. No renal mass was palpable.

Laboratory findings were as follows: hemoglobin value, leukocyte count, and differential count normal; microscopic hematuria grade 1 (on the basis of 1 to 4); and erythrocyte sedimentation rate 55 mm in 1 hour (Westergren method). A standard roentgenogram of the chest (Figure 1) showed a nodule 5 cm in diameter in the upper lobe of the left lung and a nodule 1 cm in diameter in the upper lobe of the right lung. Excretory urography revealed a nonfunctioning left kidney, and nephrotomograms were suggestive of hypernephroma.

The left kidney was explored for a definitive diagnosis and with the hope that removal of the primary tumor would cause pulmonary metastatic lesions to re-

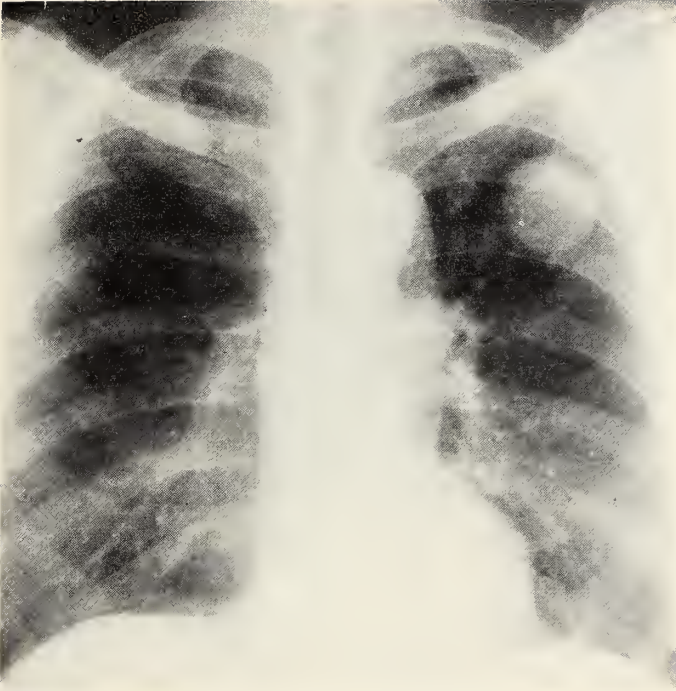


Figure 1: January 13, 1965. A large tuberculoma is seen in the left upper lobe and a smaller nodule in the right upper lobe.

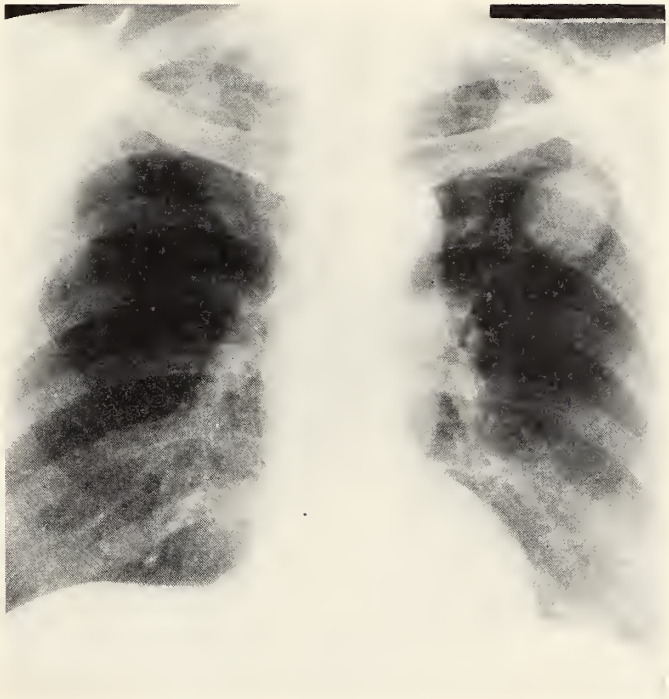


Figure 2: April 5, 1965. The large tuberculoma in the right upper lobe has definitely regressed.

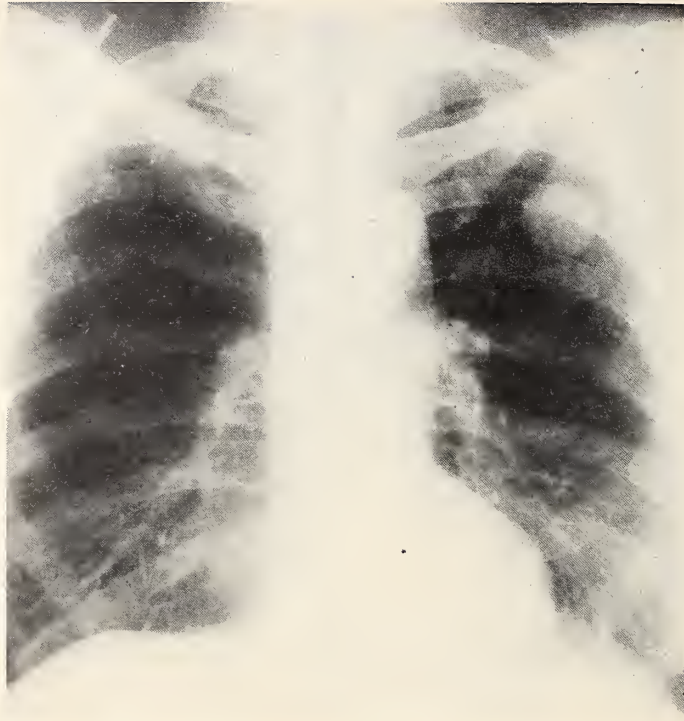


Figure 3: August 31, 1965. The tuberculoma in the left upper lobe has further regressed.

gress. Exploration revealed a dense inflammatory mass which included a considerable amount of perirenal fat about a hydronephrotic, heavily scarred kidney. The ureter was markedly thickened and surrounded by similar chronic inflammatory tissue.

Nephrectomy and partial ureterectomy were performed. Pathologic examination of the surgical specimen demonstrated a caseous granuloma, compatible with tuberculosis, extensively involving the kidney and ureter and their investments. The granuloma contained numerous focal calcifications as large as 1 cm in diameter, and the cut surface of the kidney indicated a moderate degree of pyonephrosis. *Mycobacterium tuberculosis* was demonstrated in smears of tissue from the kidney and in inoculated guinea pigs. Cytologic examination of induced sputum gave negative results. Examination of a direct smear of induced sputum for acid-fast ba-

cilli also gave negative results, but later culture and guinea pig inoculation gave positive results. The patient was dismissed after an uneventful postoperative course, having been advised to take daily 60 units of U-80 lente insulin, 300 mg of isoniazid, and 7 gm of para-aminosalicylic acid (PAS).

He returned for examination on April 5, 1965, feeling well and having gained 14 pounds. A standard roentgenogram of the chest (Figure 2) showed that both lesions had regressed in size. Sputum culture and urine culture were negative for *M. tuberculosis*. On a return visit on Aug. 31, 1965, he had no complaints, his weight had remained stable, the hemoglobin value, leukocyte count, and sedimentation rate were normal, and a chest roentgenogram (Figure 3) showed further regression in size of the tuberculomas. He has continued therapy with isoniazid and PAS.

Discussion

Very little concerning tuberculomas appears in the American literature.^{1,2} The term is applied to caseous foci representing tuberculous abscesses filled with inspissated caseous material. The lesion is spherical, has sharply defined borders, and usually measures 0.5 to 3 cm in diameter. The diagnosis of a solid focus of tuberculous caseous material is often a presumptive one made from the appearance of standard roentgenograms of the chest and this lesion must be differentiated from primary and secondary neoplasms, cysts, abscesses, and other nodules, inflammatory or vascular in origin.^{3,4} In one study of 185 cases of tuberculomas⁵ a round tuberculous focus 1.5 cm or more in diameter was considered a tuberculoma. The smallest measured 1.5 cm and the largest 6 cm in diameter. In the report of a roentgenographic study⁶ of 300 cases of round infiltrates (diameter more than 1 cm) and tuberculomas (diameter more than 3 cm) the authors postulated that there is an increase in this type of roentgenographic pattern. Multiple tuberculomas of the lung, reported in one case,⁷ measured up to 8.5 cm in diameter, increasing in size over two years and not influenced by antituberculosis therapy. Shröder⁸ has reported on 28 patients treated by resection five years previously; 26 are still alive. He advocates early resection for pulmonary tuberculosis. Moyes⁹ has advocated conservative treatment. Combined therapy over a two-year period can be adequate treatment if the patient is watched closely; if a stage is reached at which improvement is no longer occurring radiographically, resection is indicated.

Summary

A case is reported in which pulmonary tuberculomas measuring 5 cm and 1 cm in diameter respectively were associated with active renal tuberculosis. Tuberculomas measuring up to 8.5 cm in diameter have been reported in the foreign literature. The so-called cannonball tumors typical of pulmonary metastasis from a hypernephroma must include tuberculoma in the differential diagnosis, as size cannot be a distinguishing factor.

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Mayo Clinic and Mayo Foundation: Section of Medicine (Drs. Dines and Donoghue) and of Urology (Dr. Utz).

Coming Next Month:

1966 ANNUAL REFERENCE ISSUE

FRAGMENTATION OF COMMUNITY HEALTH SERVICES

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PROBLEMS OF FRAGMENTATION of health services, both individual and community, are of increasing concern to the general public. This concern is not peculiar to individual patients and families, but is now being expressed by legislators, agency administrators, and even by some professional organizations. These voices of concern are becoming more insistent and more numerous.

This fragmentation of health services has been brought about by a number of factors including the increasing trend to specialization but one of the major factors in fragmenting community health services is the division of responsibility for these services.

Is the concern expressed really justified? What is the actual significance of "Fragmentation of Public Health Responsibility"?

Does it result in improved service to the individual through decentralization and use of well-qualified specialists with a major interest in a particular problem? Does it promote diversity of approaches to the complex problems we face today, or does it result in confusion to the family, duplication and overlapping of services, gaps in service and waste of limited supplies of specialized personnel, and in excessive costs in the provision of public health services?

These are some of the questions we face in analyzing the occurrence of fragmentation of community health services. The reasons for fragmentation are many and complex. The results are generally poorly coordinated programs that are not fully achieving their objectives.

In summary, we can say that public health programs should be administered in the best interests of the individuals served—the general public.

Fragmentation of public health responsibility has occurred. There are some advantages in dividing responsibility, in the development of specialized programs, in having a diversified approach to the complex problems of our society, and often, better financial support can be obtained when public health responsibilities are

divided. Such division can provide a sharing of interest with other agencies that have programs essential to the success of health department programs. But fragmentation has created many problems; the major one being inadequate coordination. Special public health problems, particular interests of segments of the population, reluctance on the part of public health administrators to assume new responsibility, failure to give necessary leadership, Congressional and State legislation providing for categorical public health programs—all these have been factors in bringing about fragmentation.

Health departments can give leadership to programs without necessarily assuming direction of those programs.

We must be sensitive to the needs and desires of the community and help in resolving public health problems as the community sees them. We must have a broad concept as to what public health is.

We must involve the community in planning and we must demonstrate our ability to successfully develop new programs and make sure that the community knows of our successes.

As an organization we can support improved concepts of administration at all levels of government.

We can work with coordinating councils and advisory committees and we can work more closely with staff of other agencies sharing information and planning services together at the service level.

We must look for improved ways of providing service and we must be willing to change when better administrative arrangements or methods of providing service are available.

Determination of the future pattern of administration of public health will largely depend on our skills, our ingenuity, our willingness to face new complex problems and our willingness to join with other agencies, with other staff members in seeking better means of improving service to the individual.

Some fragmentation of public health responsibility is bound to occur. Our job is to point out its disadvantages and to avoid unnecessary fragmentation, to take advantage of its benefits when it occurs, and to keep the fragments together.

DRUG ABUSE CONTROL

Sixteen drugs in addition to amphetamines and barbiturates have been brought under the new Drug Abuse Control Amendments. A symbol to identify these drugs has also been established. The distinctive symbol, a large C encircling R, will make it easy to identify the controlled drugs. The order bringing the 16 additional drugs under the law was published in the Federal Register on March 19, 1966 and becomes effective on May 17, 1966.

All producers and distributors—including pharmacists—must take an inventory of the 16 drugs (and combinations of these drugs with each other) as of May 17. The inventory records must be kept for three years. *This Week for Hospitals, March 25, 1966.*

Report on Experiences in Swaziland

Douglas W. and Nancy Soderdahl

THE POLICE SUSPECTED ritual murder. His body had been dragged out of the river and brought to the hospital morgue for autopsy. As one approached the tiny shed wherein lay the body, the ugly stench overpowered all but the very brave—or the insensitive. The undraped body revealed that one arm had been nearly torn off by those who had dragged it from the water. All features were exaggerated and grotesque as a result of swelling. The eyes, ear lobes, lips, tongue and fingernails were intact—favorite parts for the potions of the witch doctor. The genitalia, however, were missing. The suspicions of the gendarmes were probably correct.

Incredible but true—in Swaziland, site of a Smith Kline and French Foreign Fellowship for my wife, Nancy, a Registered Nurse, and myself, senior medical student at Northwestern University Medical School.

The reality of our trip to Swaziland as SKF Fellows did not come into sharp focus until the monstrous “flying machine” touched down at Jan Smuts International Airport, Johannesburg, South Africa. The time between learning of our selection by the Association of American Medical Colleges and departure, March 19, was so short that Nancy and I were continuously occupied with special errands, obtaining visas, passports and immunizations, letter writing and telephoning. Our destination was Manzini, Swaziland, 300 miles from

Johannesburg, where is located the largest mission of the Church of the Nazarene, our foreign sponsor.

A reminder of home, an eight-cylinder Pontiac station wagon, whisked us toward Swaziland in order to proceed through customs at the border by 6:00 P.M. The pavement stopped at 200 miles but the road continued, washboard fashion, for nearly the remainder of the journey. Approaching Swaziland, the monotonous rolling grass plains of South Africa gave way to the rugged mountains of the country appropriately dubbed the “Switzerland of southern Africa.” The kraals (collective name for a group of native huts) which dot the countryside as far as the eye can see, in their way welcomed us to Africa. And, of course, the barefoot and only slightly clothed African pedestrians greeted us with international signs, the wave and smile.

Swaziland, smallest of the protectorates of the British Government in southern Africa, covers 6,700 square miles, extending 120 miles north to south and 90 miles east to west. It is bounded on the north, west, and south by the Transvaal province of South Africa, and on the east by Portuguese East Africa and the Natal province of South Africa. The country inhabited by the Swazi is characterized by a wide variation of vegetation, climate, and soil, being transitional between the highveld and the coastal lowlands. Roughly half

of Swaziland is estimated as capable of cultivation and afforestation.

Since Swaziland is south of the equator, we had the uncommon experience of passing from winter into fall. The rainy months are generally the hot months, October to March. The climate in the highveld and middleveld (Manzini) is temperate, while in the lowveld people suffer from an almost tropical climate.

Africans comprise the predominant race group and number about 380,000, as opposed to less than 10,000 Europeans and Asiatics. All whites are considered Europeans. Swati, commonly known in its Zulu-ized form as Swazi, is the chief African language, although English is the official language. Swazi falls within the southeastern zone of Bantu languages, and is sufficiently similar to Zulu for Zulu to serve efficiently as the only written and official vernacular.

Swaziland, together with Bechuanaland and Basutoland, are under the direct control of the British Government, headed in the local administration by the Queen's Resident Commissioner. He makes recommendations regarding policy and legislation and is responsible for their execution. Native authority rests in the paramount chief, who acts in cooperation with the Swazi National Council of Chiefs. The power that the native chiefs wield over their subjects is usually referred back to the right they exercise over the distribution of land. The Queen Mother, whose kraal we visited, has nearly the power of the paramount chief.

Manzini (town by the water), a town of about 4,000 inhabitants, is situated nearly in the geographical center of Swaziland. The Nazarene mission at Manzini consists of primary, secondary, and teacher-training schools, an orphanage, a church, a nursing college of 85 students, and the hospital. The hospital is the largest single institution in Swaziland. It and the bush dispensaries account for about one-half of all the medical installations in Swaziland. Its bed capacity is 312, but the average daily census last year was 352, so that many patients sleep on mats on the floor. In addition,

there were 71,000 out-patient visits to the bush clinics, staffed by resident African or missionary nurses, and visited once monthly by a missionary physician. Most dispensaries do not have such modern facilities as running water, electricity, baths, etc. Several of the clinics are accessible only by Land Rover, British equivalent of, and sturdier than, the Jeep.

In addition to the dispensaries, the hospital supervises a leper colony, the only one in Swaziland, 36 miles distant, over unbelievably rough roads and indescribable scenery. Lepers formerly were kept at Enquabeneni (place of quarreling), where they were under the thrall of the witch doctor as well as maimed by disease. In 1948 the British Government allocated money for the building of a modern leprosarium on a new site. The Swazi Government could not run the new institution and subsequently contracted with the Nazarene mission to assume control. Approximately 30 lepers are housed there presently, an indication that efforts toward eradication of leprosy are effective. Nearly every one of the many aspects of this cruel, crippling disease was available to us during our five-day stay there. We were impressed by the tremendous need for socio-cultural rehabilitation of these patients, for the psychological sores of leprosy are as ugly and deforming as the physical sores.

Fine Doctors Are Staff

Only five doctors are assigned on a regular basis to the staff of the Raleigh-Fitkin Memorial Hospital. During our stay the impossible load was shouldered by four doctors. We never ceased to marvel at the quantity, as well as high quality, of work these doctors do. In most instances, their medical duties are only a part of the work they perform throughout the mission program. Of necessity then, a great deal of work ordinarily done by the doctors is done by nurses and auxiliary personnel.

Since the purpose of our SKF Fellowship was to provide a learning experience, the mission very kindly cooperated in an attempt to permit us as broad a view of

the medical work as circumstances allowed. I rotated through each of the hospital wards, in addition to making twice-weekly visits to the outlying dispensaries. Besides making trips with me to the bush clinics, Nancy helped to supervise as needed in the hospital wards. She and I were both active in the teaching program for the student nurses.

General impressions of the medical work in Swaziland are difficult to delineate. We agree that medicine is DIFFERENT, probably because the people are different. The doctors are Europeans; the medicines are modern, and for the most part British, which is an adjustment for the American doctor; the laboratory is well-equipped; the radiology department does excellent work; the pharmacy is adequate—nevertheless medicine is DIFFERENT. Illustration with cases provides insight.

Witch Doctor First

The patient's first contact with the doctor is either in the out-patient department of the hospital or in the clinics in the bush. Stoic Swazis make their way to the hospital usually in the end stages of disease, and most often after the tinyanga (witch doctors) have applied their trade to the hapless patient. This trade, by the way, is highly lucrative. A certain amount of magico-medical lore is common knowledge and practice, but in all serious situations the Swazi appeals to specialists who can be classified roughly into: (1) medicine men or herbalists who work primarily with ingredients from tree roots, and (2) diviners who rely mainly on inspiration. Herbalists enter the profession voluntarily, while diviners are possessed often against their will. It is not an uncommon sight to see a witch doctor, gallbladder dancing perkily from his staff, making rounds on the hospital wards. The medical staff permitted this, so long as the witch doctor did not bill patients through the hospital offices or write notes on the charts. My most frequent contact with the witch doctor was the characteristic markings he made on the patient's skin, usually di-

rectly over the symptomatic area. This practice helped me surmount the language barrier, which at times proved formidable. I was provided with student nurses to translate, but they have a curious attribute of being extremely soft-spoken, a sign of respect, I learned. A hearing aid will be part of my paraphernalia next trip.

Ancestor Worship

In addition to the people who present late in the course of their disease, there are the ones who sign out of the wards against medical advice. In the case of terminal patients, this is desirable both for the hospital and the Swazi patient. The hospital, of course, prefers to have as few deaths within its walls as possible, because in the struggle with the witch doctor a death can be very damaging to prestige. For the Swazi it is important to die on his home territory, because he believes his spirit enters the ground upon which he dies and continues to influence the lives of his successors. The ancestral cult is the religion of the majority of the Swazi, including the rulers. The emadloti (ancestors) wield extensive powers. They are thought to send bad dreams, scarcity, difficult birth, and sickness of various forms. Ancestors are not worshipped, but rather are addressed in much the same way as are the living. The Swazi prayers are spontaneous and conversational. Swazis do not worship nature gods.

In order to preserve accuracy it must be stated that there are those patients who, after traveling considerable distances, come to the hospital expecting admission. There are others who will not leave the ward until they feel ready, regardless of doctors' opinions. This seems to be a quirk of many of the king's wives, who take leave of absence as it were.

Nancy and I appreciated the many visits to the bush dispensaries for the excellent opportunity they provided to see the people literally in the raw. It is surprising and heart breaking to learn that sick people walk twenty miles and more to the clinic to see the doctor, for whom they often wait until late at night. Between doctors' month-

ly visits, the resident nurse handles what she can, but occasionally must bring an emergency into the hospital. Diagnosis by physical examination is necessary, because histories are garbled beyond recognition in their filtration through interpreters. The clinics do not have such "modern" equipment as a blood pressure cuff or an ophthalmoscope. The medicine prescribed coincides exactly with the stock supplies. There are certain illnesses patients should get only at certain times!

Children as a Status Symbol

Childbearing is associated with status among the Swazis. As a consequence, a woman strives to be as fruitful as possible. In fact, a man who buys a wife may, if the wife does not produce children, ask for some of the lobolo (bridal price) to be returned to him. In some instances, a sister is sent to bear for her. This is background for the story of a patient I saw. She was a woman in her fifties. Her chief complaint was a large abdomen which further questioning revealed might be a gestation. She had no children, but had had one "miscarriage." Furthermore, she affirmed that she wanted babies. Examination disclosed a gas-distended abdomen. Later I learned that it is fairly common for a woman to deceive herself into actually believing that she is pregnant and subconsciously to bloat her abdomen to appear outwardly as if she is expecting. So strong is cultural pressure to bear children.

A mother brought her young child to the dispensary complaining that his "tongue is tied." She wanted me to cut the frenum of the tongue, which seemingly fastens it to the floor of the mouth. A mother will ask that this be done when she feels that the baby is not sucking properly or does not talk when she thinks it should. The doctor knows better than to believe this will remedy the situation, but then he knows that if he does nothing the child will return to the kraal, where the witch doctor with a dirty razor blade (or worse) and some muthi (native medicine) may cause real trouble. So the cut was performed.

In the medical wards of the hospital

there is the huge variety of tropical diseases, which runs nearly the entire gamut of tropical medicine with the exception of yellow fever. Pellagra, amebic and bacillary dysentery, typhoid fever, leprosy, polio, tuberculosis, osteomyelitis, and bilharziasis are found as well as heart and renal diseases, diabetes, asthma, carcinoma and cirrhosis of the liver. I matured rapidly when given major responsibility for the care of approximately 80 medical patients.

One woman was transferred to my ward because she had become psychotic following delivery. We did everything in our power to convince her family that she could not go home because the baby would receive inadequate care. The family did not listen, however, feeling they had given us our chance and now it was the witch doctor's ease. Again the competition!

Snake bite victims present regularly to the hospital. This is the land of the green and black mambas, victims of which rarely need the hospital because of the high potency of the venom. Death follows a mamba bite in ten minutes. Puff adder bites cause local blood vessel thrombosis, resulting in great areas of gangrene and sloughing, and quite complicated surgical problems. One Sunday afternoon a German chap walked in, holding a snake in one hand and favoring the other hand, which had been bitten. The snake (it was living, to Nancy's horror) was a ringhals (a tree cobra). We treated the man with massive doses of antivenom, but with no amount of persuasion would he allow us to kill the snake. Any snake that could bite him "deserved to live." That night as he lay in the private ward, open to any paying patient regardless of race, we feared for his life. His entire arm swelled to twice normal size, his blood pressure rose precipitously, he became unconscious and his tongue swelled nearly occluding his airway, and his oliguric output was loaded with red blood cell casts. Combining the specific treatment of antivenom with symptomatic treatment including antihypertensives and steroids we saw him walk out the front door two weeks later.

Since the addition of an American Board-

certified surgeon eighteen months ago, the surgical department has made tremendous advances. Since many of the Africans are becoming Europeanized, many of the ailments are familiar to the American practitioner, including gall bladder, stomach, and intestinal work. There is an active cancer service which includes even lung carcinoma. During my stay, I first-assisted in two radical neck dissections, exploding misconceptions of the primitive quality of missionary medicine. Trauma cases occupy a good portion of the surgical work, comparing favorably with those cases presenting at the Cook County Hospital emergency room in brutality. Between thirty and fifty surgical procedures are done weekly. Because of personnel and linen shortages, most of these cases are done on Wednesday, which is Theatre Day in Manzini. The schedule commences at 8:00 a.m. and not infrequently continues past midnight. Without question the highlights of my operating room experience were the three cesarean-sections I performed, assisted by one of the staff doctors. I discovered that performing an operation is a trifle more difficult than assisting!

Active Prenatal Program

The outpatient clinics include an active prenatal program with excellent nutritional supplementary work. The fifty-bed obstetrics unit is overflowing nearly all the time. The rate of Cesarean-sections in Swaziland is far higher than in most areas of the world. Idiosyncrasies of the African pelvis seem to account for this. The hospital also maintains a home delivery service, which is quite similar to the Chicago Maternity Center. The candidates regularly attend the prenatal clinics at the hospital, but are delivered by midwifery students in the homes. This provided us an excellent opportunity to gain entrance to the Swazi huts, which range from the dirtiest, unfurnished hut, to the clean, furnished house.

I learned early that when a young woman presents in the clinic with low abdominal pain, she usually wants to know if she is pregnant. Also it is extremely im-

portant during the first prenatal visit to tell her that she has a human being growing in her, not an animal. Multiple births and malformed babies are looked upon as animals and left to starve. The procedures surrounding childbirth itself are often mutilating.

The most frequent diseases among the pediatric patients are those of a nutritional basis, including many diagnosed cases of kwashiorkor. They do have their share of trauma cases including burns, snake bites, and mutilation by crocodiles, but relating these would require considerably more space.

More Received Than Given

When we departed from the United States we did not expect to give more than we would receive. Indeed we did not. Our benefits were not entirely medical, however. We had a superb socio-cultural experience as well. During our stay we were privileged to be co-workers with the founders of a new church in the bush. The church was started simply by driving among the kraals one Sunday morning and announcing that a service was to be held. Most of the first congregation were men who were present primarily to learn what the missionaries had to offer. During the following weeks women and children were permitted to come, swelling the gathering to about 75 in ten weeks. The people are completely uninhibited, and during a church service they think nothing of nursing a baby or getting up to void a few feet from the congregation. The eagerness and receptivity of these people virtually untouched by civilization cannot but impress those who experience it.

At the opportunity to undertake a similar program again we would respond with a resounding "Yes"! My wish is that some portion of our enthusiasm and impressions is conveyed to the reader herein.

We feel that these experiences in Africa have prepared each of us to better serve in our respective professions. For them we are extremely grateful to both Smith Kline and French and the Nazarene Church.

CANCER OF THE RECTUM AND PREGNANCY

Frank J. Walsh, M.D.* , Caesar Portes, M.D.** and
Leonard Bressler, M.D.*** /chicago

CANCER OF THE RECTUM and colon is one of the leading types of cancer, according to Dr. Roald N. Grant,² the editor of the *Journal of the American Cancer Society*. "76,000 new cases of rectal and colon cancer will be diagnosed this year (1964) and approximately 42,000 Americans will die this year from this disease."

Dr. Charles W. Mayo⁶ wrote that colonic-rectal cancer is a grave significance in persons under 30 years of age, and that the tumor is very likely to be of high malignancy and the duration of symptoms short. The progress of the neoplastic process is so rapid that delay in recognition can mean the difference between life and death. The lesions are usually adenocarcinomas.

Larry McGowan wrote a review on "Carcinoma and Pregnancy" for the *Obstetrical and Gynecological Survey* issue of April 1964. In the summary of this interesting article, he states that the obstetrician is in a unique position to diagnose cancer with the patient coming to him often asymptomatic for obstetrical care and a complete physical examination and that the earlier detection of cancer in the pregnant or non-pregnant person, the greater chance of survival. He also said that occasional case reports of cancer and pregnancy are of value, but that precedent in therapy should not be determined until sufficient clinical material has been followed for five years or more. The treatment should be directed at destroying the cancer, if it is considered curable, preserving the fetus if the cancer is terminal and compromising with both positions when palliation is indicated and the fetus needs more time to become mature before delivery.

However, cancer of the rectum in preg-

nancy is extremely rare. It is easily masked by the multiple complaints associated with pregnancy and easily overlooked. According to Dr. Caesar Portes⁹ 75% of all rectal carcinomas can be detected by a careful history and routine digital rectal examinations. All suspicious cases should have proctosigmoidoscopic examinations and if indicated—biopsied.

The incidence of rectal cancer in pregnancy is 1/50,000 deliveries.

The first reported case of cancer in pregnancy was that by Jean Cruveithier in 1837.¹ Mlle Tchegotarewsky¹¹ in 1908 collected and reported 35 cases. In 1936 W. T. Pommerenke¹⁰ reported a case of pregnancy following radical resection of the rectum for carcinoma. In March 1952 E. M. Jennings⁴ reported 78 collected cases, including one of his own. In 1955 D. W. McLean⁷ gave a critical review and treatment during the various trimesters of cancer of the rectum and pregnancy.

He surveyed the members of the Michigan Society of Obstetrics and Gynecologists in 1955 and found seven cases had been diagnosed in approximately 350,000 pregnancies; an incidence of 1/50,000. Since 1940 only eleven cases had been reported in the world literature.

In 1956 H. Close Hesseltine³ in his excellent paper on "Malignant Diseases Associated with Pregnancy" reported four cases, three treated prior to pregnancy and one during pregnancy.

In 1957 M. Bennett Marcus⁵ reported a

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ease of carcinoma of the rectum complicating pregnancy and a review of the literature.

James A. O'Leary⁸ reported in 1962 a case with instructive observations regarding management and the use of chemotherapeutic agents with relation to the mother and fetus.

The survival rate of rectal carcinomas per se was reported by Grinnell. It was 25.6% among 2,000 cases collected between 1961 and 1945. Those with abdominal perineal resection had a 38.0% survival rate.

The diagnosis of rectal carcinoma is made by the history of rectal bleeding, tenesmus, bloody diarrhea or constipation with ribbon-like stools.

Rectal examination will oftentimes reveal a mass that can be verified by proctoscopic examination and biopsy.

The treatment of carcinoma of the rectum and pregnancy varies with the trimester of the pregnancy and the patient's desire for a child.

In the first trimester, McLean,⁷ et al recommend abdominal perineal resection without interrupting the pregnancy. In eight such cases reported all the mothers survived the surgery and three living babies were obtained.

In the second trimester, they believed an abdominal perineal resection could be done until the twentieth week without emptying the uterus but from then until the twenty seventh week of gestation the uterus should be emptied, unless the patient was extremely desirous of having a living child. Of seven cases so treated there was one maternal death.

In the third trimester a cesarean section should be done, followed by abdominal perineal resection.

In order to arrive at a plan of treatment of our case Dr. Byron M. Black of the Mayo Clinic was contacted and he advised cesarean section at such time as we could obtain a living child and an abdominal perineal resection at a later date, but not to do a hysterectomy.

Case report: Mrs. G. K., 23 year old Gr 1/0 reported to us April 1, 1963 for pre-

natal care. Her E.D.C. was 10/23/63. Her history and course were uneventful until 9/1/63 when she reported her *first bloody* stool with no loss of weight. Proctoscopic examination was done and an adenomatous mass was noted on the posterior rectal wall about 6 centimeters above the anus. On 9/10/63 a biopsy was performed and a diagnosis of adenocarcinoma of the rectum was reported. The patient and her husband were informed of the findings and said they desired a living baby.

On 10/6/63 the patient returned to the hospital and a low cervical C section was done with the delivery of a living male child weighing 6 lbs. 13 oz.

Her postoperative course was uneventful and she returned to the hospital 11/3/63 for an abdomino-perineal resection. No metastases were observed at surgery. She was discharged November 24, 1963 and has been free of evidence of recurrence of her disease on subsequent visits.

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HEMO-DYNAMIC EFFECTS OF GLUCAGON IN THE SPLANCHNIC AREA

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OUR PRESENT WORK seems to support the idea that glucagon is a regulator of various physiologic functions.

We have reported earlier that in the dog 1 mg of glucagon i.v. raised portal pressure (average 199 mm of water) and increased portal oxygen saturation, often to or near arterial levels. These effects occurred in the left gastric vein, in the superior mesenteric and in the right gastroepiploic veins, and they have been confirmed repeatedly.¹ We have attempted to abolish this effect of glucagon by insulin, which in certain areas opposes glucagon, by pitressin, which decreases portal vein pressure,² by blocking the autonomic system with ergotamine and atropine, and by giving repeated injections of glucagon.

If these results can be proven definitely to apply to man, a valuable therapeutic aid may be obtained for the treatment of liver disease in cases where increased circulation through the liver and increased oxygen supply to the liver may be thought to be helpful.

Methods

Fifteen mongrel dogs of both sexes (11-15 kg, av. 13.5 kg) were used; food but not water was withheld for 24 hours. Under sodium pentobarbital anesthesia (25 mg/kg i.v.), the portal vein, the peripheral end of the superior mesenteric vein, the left gastric vein, and the inferior vena cava, were cannulated with short polyethylene

catheters (1.7 mm i.d.) which were brought out through the skin and kept open by frequent small injections of heparin (100 mg heparin per 1000 ml saline). Following recovery, the unanesthetized dogs were kept in a support and venous pressures in the splanchnic area were recorded with Statham P23Hb transducers on an Offner type R Dynograph. The dogs were fed daily and had water, and they were used from two to 21 days. The O₂ saturation of the blood was determined spectrophotometrically, using wave lengths of 480 and 506 microns.³ When stable levels of arterial and splanchnic venous blood pressures and O₂ were present, drugs were administered. Insulin Novo (re-crystallized 10 times, free of glucagon) was injected i.v. Blood sugars and O₂ saturation were determined repeatedly, the former by the Somogyi-Nelson method. Forty to 65 minutes after injection of insulin, 1 mg of glucagon (We are obliged to Hoffmann LaRoche for supply of dihydroergotamine methansulfonate, and to Eli Lilly for crystalline glucagon HCl.) was given i.v. In other experiments, 10 units Vasopressin (Parke Davis & Co.) was given i.v., and glucagon 1 mg was injected i.v. 14 to 43 minutes later.

In three experiments, 1 mg ergotamine was administered i.v., and 1 mg of glucagon was injected 45-90 min. later; venous pressures or O₂ saturations were recorded.

In three experiments, 10 mg atropine sulfate was administered i.v. and glucagon 1 mg was given i.v. 10-12 min. later. In two experiments, venous pressures were re-

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TABLE 1

Effect of Insulin on Venous Pressures in the Splanchnic Area in Unanesthetized Dogs

Exp. No.	Insulin Novo Units i.v.	Maximal Increases in Pressure Over Control Levels, mm Water				Time to Max. Values Min.
		Portal Vein	L. Gastric Vein	Sup. Mes. Vein	V. Cava	
1.	16	71	282	90	0	30
2.	20	59	357	40	0	20
3.	16	59	94	110	0	30
4.	20	43	—	—	0	30
5.	20	35	—	40	0	15
6.	20	—	—	20	0	30
7.	20	177	—	150	-25	30
8.	20	71	—	90	-25	50
9.	20	35	—	40	-25	30
10.	20	—	—	100	-59	50

corded after repeated injections of 1 mg of glucagon at intervals of 70 to 90 minutes.

Results

Table 1. In 10 experiments, venous pressures in the splanchnic areas were recorded after insulin Novo 16 to 20 u.i.v. In all tests, blood sugars dropped to 10 to 30 mg % within 15 to 50 minutes; pressures in the splanchnic veins rose considerably above control levels, while there was no change or a slight decrease in pressure in the vena cava. The time after which maximal pressure values were observed varied between 15 and 50 minutes. In three experiments, splanchnic vein O₂ saturation showed a decrease of a few percent.

Table 2. In eight experiments in which glucagon 1 mg i.v. was given 40 to 65 minutes after 16-20 units of insulin Novo, there was either no or a moderate increase in pressure in the portal vein, while in all experiments slight to considerable increases were seen in the superior mesenteric vein. Pressure in the inferior cava did not change.

Table 3. In four experiments, when glucagon was given i.v. 14 to 43 minutes after

injection of pitressin i.v., there were slight increases in pressure in the splanchnic veins, while pressures in the vena cava remained unchanged.

In six experiments, following injection of autonomic blocking drugs (atropine or ergotamine), 1 mg of glucagon i.v. increased splanchnic venous pressures up to 67 mm water and increased O₂ saturation of splanchnic vein blood by 10%.

Repeated i.v. injections of glucagon produced decreased and shorter responses in splanchnic venous pressures.

Seven Experiments

In seven experiments, the hepatic artery was clamped peripheral to the gastroduodenal artery five minutes before and during injection of glucagon. This procedure did not abolish increases in pressures in splanchnic veins in response to glucagon.

We have found that relatively fast (but not slow) injection of 100-500 ml of saline 0.9% or glucose 5% into the portal was followed by increases in pressures in mesenteric veins, similar in extent and duration as those following i.v. glucagon.¹ In order to test for the presence of a possible

venous stretch reflex, the vena cava and the portal vein were distended with a ureter-stone catcher of the Dormia type in three acute experiments. Openings of the catcher by which the veins were distended but not occluded, did not change pressures in splanchnic veins.

In 31 experiments on unanesthetized dogs we performed 800 determinations of O₂ saturation in the portal blood vein after i.v. injection of: levophed 4 ml of 2% solution in 1,000 ml normal saline at 1.5 ml (0.12 mg) p.min., atropine sulphate (10 mg), ergotamine tartrate (1 mg), pitressin P.D. (10 μ), prostigmin salicylate (0.5 mg), histamine acid phosphate (1 mg), insulin Novo (20 units), and serotonin creatine sulfate (3 mg). In none of these experiments was an increase in splanchnic vein O₂ saturation seen.

Discussion

We have attempted to analyze surprising results described in a preceding paper¹ on the effects of glucagon on splanchnic venous pressures and oxygen saturations in splanchnic blood; glucagon was able to raise splanchnic venous pressures, particularly in the left gastric vein, by approximately 20 cm of water and to arterialize

splanchnic venous blood to a degree that in some experiments the blood from the left gastric vein escaped in arterial spurts and with bright red color of arterial blood.

Our first step in the analysis was to use insulin which may be an antagonist to functions of glucagon other than on blood sugar levels. We find that insulin practically abolished the increased oxygen saturation in splanchnic blood produced by glucagon. This observation is supported by results obtained by ourselves and others. Insulin depresses gastric motility and secretion for up to 30 minutes and, when the depressed blood sugar begins to rise, the stimulating effects of insulin on gastric secretion and motility occur.⁴ At about the same time an increase in the arterial blood flow to the stomach has been reported,⁵ and we now find an increase in splanchnic venous pressures but a slight decrease in oxygen saturation. The increased splanchnic venous pressures following insulin may be caused by an increased blood flow in the splanchnic area,⁵ and the decreased oxygen saturation may be caused by increased oxygen utilization due to increased gastric secretion and motility.⁴

Pitressin decreased the usual effect of

TABLE 2

Effect of Glucagon 1 mg i.v. on Venous Pressures in the Splanchnic Area in Unanesthetized Dogs Pretreated With Insulin

Increase Over Control Pressure in mm of Water			Time in Min.
Portal Vein	Sup. Mesenteric Vein	Vena Cava	Between Insulin and Glucagon Injection
24	20	0	50
0	40	0	65
0	20	0	65
118	110	13	43
—	150	0	57
71	90	—	57
—	200	0	65
100	60	—	40

TABLE 3

Glucagon-effect on Splanchnic Venous Pressures in Dogs Pretreated with Pitressin 10 Units i.v.

Exp. No.	Increase of Venous Pressure in mm Water				Time Between Injection of Pitressin and Glucagon Min.
	Portal V.	Left Gastric V.	Sup. Mes. V.	V. Cava	
1	35	0	40	0	22
2	12	—	20	0	15
3	59	—	80	0	43
4	24	38	100	0	14

glucagon on venous pressures in the splanchnic area, but did not abolish them entirely.

Diminishing Effects

Repeated injections of glucagon showed diminishing effects on splanchnic venous pressures. This appears to parallel decreasing glucose output by the liver with repeated injections of glucagon and it may mean that glycogenolysis plays a role in effects of glucagon on splanchnic venous pressure and oxygen saturation. Shoemaker et al. have reported similar observations on diminishing effects of repeated injections of glucagon on portal blood flow.⁷

Autonomic blocking agents like atropine and ergotamine did not abolish the increase in pressure and oxygen saturation in splanchnic veins following glucagon, and noradrenalin did not have a marked effect.

Clamping of the hepatic artery did not abolish the rise in oxygen saturation in the splanchnic veins following glucagon. This may mean that back-flow of arterialized blood from the liver does not play a role in the oxygen raising effects of glucagon.

The fast rise in oxygen saturation, venous pressure and blood flow in the splanchnic area following glucagon can be explained by blood being shunted away from the gastric and intestinal mucosa via arterio-venous shunts. This may also provide an explanation for gastric secretory depressing effects of glucagon and, as

stated above, may be coupled to the glycogenolysis produced in the liver by glucagon. A sudden increase in venous flow in the mesenteric veins following opening of arterio-venous anastomoses may be so extensive, that gradients of pressure between the smaller veins and the portal veins are created, although this is an open system. The plastic tubes used did not appear to be too narrow, because we observed pulsating spurts of bright red blood coming out of the tube in the left gastric vein following an injection of glucagon.

Summary

In an earlier report, glucagon was found to raise pressures and O₂ saturation of splanchnic venous blood. The present work describes an analysis of these phenomena. Insulin alone raised splanchnic venous pressures; when insulin was followed by an injection of glucagon, splanchnic venous pressures rose, but O₂ saturation in the splanchnic venous blood did not rise. Pitressin decreased the effects of glucagon on splanchnic venous pressures. Atropine and ergotamine decreased but did not abolish the effects of glucagon on splanchnic venous pressures and O₂ saturation. Repeated injections of glucagon produced diminishing effects on splanchnic venous pressures. The following drugs did not change O₂ saturation in splanchnic venous blood; levophed, atropine, ergotamine, pitressin, prostigmine, histamine, insulin, and serotonin. Possible mechanisms of ae-

tion of glucagon and other substances on splanchnic hemodynamics are discussed.

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MENTAL HEALTH IN APPALACHIA

Take, for example, the men who have been miners and for one reason or another have been forced out of the mines. Many actually lose their respect for themselves as physical beings. If a man has a first or second grade education and a strong back and his back gives out, his education is of no support and he has little to sustain his image of himself as a self-sufficient man. The same thing happens if his job gives out. Since he thinks that no man can be down and out and unable to support his family without some good reason, he fabricates reasons to defend himself psychologically and soon has a fine assortment of psychosomatic or neurotic symptoms. This represents an attempt to achieve psychological security in addition to the minimum financial security of welfare. For, while some form of public assistance may take care of his problems or work and take care of his family, he himself will not be able to go back to work unless he has confidence in himself and confidence that he can handle his job. He must have some assets to protect that confidence. If he has no hope and passes this feeling on to his children, he adds to the generation that has given up the struggle of living and clings to the one thing it has—the welfare check.

For many men today in eastern Kentucky and parts of West Virginia, the only means of survival is to be classified as disabled under one of the welfare programs. It is understandable that these men develop illnesses that are not always physically based. It is also understandable that their children drop out of school when they see nothing to hope for. This situation is so widespread that it presents a motivation and a mental health problem of major proportions. *U. S. Department of Health, Education and Welfare.*

SUICIDE IN CHICAGO: A CALL FOR ACTION

Thaddeus Kostrubala, M.D./chicago

IN THE AREA OF SUICIDE, American medicine, in general, has remained silent because quite often suicide is not seen as a medical problem, but one that involves morals, religion and culture. It is my view that suicide is a medical problem. My reasoning for this position is twofold. The first line of reasoning follows from the fact that psychiatry is a medical specialty whose business is to prevent and treat "mental illness." The definition of who is mentally ill is made by the culture—and, generally, we do consider ending one's life by suicide as abnormal behavior. Therefore, the problem of suicide is the concern of psychiatry and of medicine. The second reason for this being a medical problem rests upon the findings of the Los Angeles Suicide Prevention Center. Simply stated the majority of people who do kill themselves specifically ask for help prior to committing suicide.¹ In addition, the

majority of those who do kill themselves suffer from what we currently label as a depressive reaction. This syndrome of depression is highly responsive to modern psychiatric techniques. Therefore, we have evidence before us that people are dying from a medical disease.² It is the responsibility of medicine to answer this final cry for help.

The Humanitarian Position

The humanitarian position is not difficult to relate to the problem of suicide because of the clear fact that it is the humanitarian position to respond to a call for help. And as noted above the majority of those who die by suicide do ask for help. However, unless we examine the extent of this problem we may not mobilize sufficient community concern to establish a program that will answer the cry for help.

A brief review of the problem of suicide in Chicago should cause the flame of humanitarian concern to burn with sufficient heat to purge our inertia and apathy to the extent that we do mobilize a program of suicide prevention in Chicago.

The facts are these: In the past ten years approximately 300 people are reported to have died by suicide in Chicago every year.³ This does not include the suburbs. This means approximately one death per day in Chicago that finally ends up being registered as a suicide. We estimate that approximately three to five times that number actually kill themselves. But for a complex set of reasons they do not appear as suicides in our statistics.⁴

If we use comparative data in the past five years more people are reported to have died from suicide each year than from automobile accidents. The same holds true, each year, for murder and for tuberculosis.

The humanitarian should be moved to action by these factors of death and it is my hope that the movement be in the di-

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rection of the establishment of a 24-hour-a-day suicide prevention center for Chicago. This humanitarian concern has been mobilized in other cities, such as Miami, Florida.⁶ A Suicide Prevention service was established by laymen and it was necessary for medicine to follow the lead of the community.

The Sociologic Position

In Chicago the person who is most susceptible to death from suicide is white, male and around the age of fifty.⁶ This is in agreement with the national statistics. Using the national picture we can further describe this man as a successful professional or businessman and a respected established member of the community. The unanswered question is why does this person kill himself? Also, why did Marilyn Monroe, Ernest Hemingway and James Forrestal kill themselves? Why do children commit suicide? Why is the rate of suicide, in Chicago, increasing in Negro females?⁷

We must begin to ask if it is possible that certain populations in our culture are in a high risk group because of social or cultural conditions that prevail in our society that specifically affect these groups to the extent that they draw the conclusion that suicide is "the only way out"?

Therefore, a careful evaluation of the data may reveal that there is something we can do to genuinely prevent suicide for large groups of people—just as we found that we could prevent typhoid fever by providing pure drinking water.

Conclusion

We have enough evidence today from the medical, humanitarian and sociologic points of view to justify the establishment of a suicide prevention center for the city of

Chicago. It is to our discredit that an adequate center does not exist in Chicago.

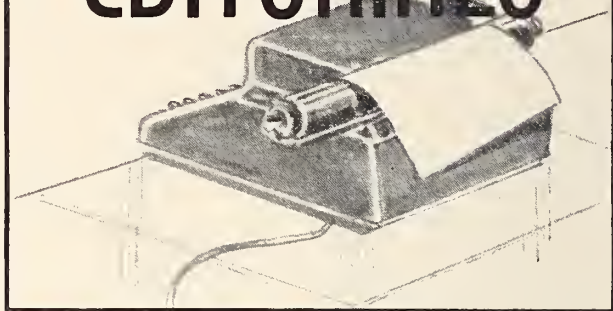
The Chicago Suicide Prevention Center should be available immediately to anyone contemplating suicide in our community by telephone on a 24-hour-a-day basis. It should also provide the resources necessary to respond to such an emergency including the dispatching of a trained professional to go to the home, bar or office where the emergency exists. This center should be backed by members of the community who are willing to mobilize community indignation and support, break the barriers of bureaucracy and help at every level in its establishment, maintenance and growth.

The research arm should address itself to the exciting task of examining the culture with the hope that they, through their community related supporters, may be able to eradicate the root causes of suicide in our city. We should expect the Chicago Suicide Prevention Center to evolve in a dynamic and exciting way into a continuously meaningful effort to help those in distress.

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EDITORIALS



THE CHILD SAFETY AND DRUG SAFETY ACTS

President Johnson will go down in history as a fighter of many wars. The affair in Viet Nam may receive the most publicity but on the home front we are contending with a war on poverty, war on cancer, heart disease and stroke, and more recently, a war on hazardous substances. The federal government hopes to correct abuses in this field by regulating the manufacture, distribution, delivery and possession of depressant and stimulant drugs. These include the amphetamines and barbiturates; others will be added to the list at the discretion of the Food and Drug Administration. The rules applying to records and prescriptions have been distributed to all physicians. The same applies to the penalties.

The latest war is against anything that might poison or harm children. The culprits include household substances that are so hazardous that warning labels are not adequate safeguards. The ruling also includes a ban on the sale of toys and other children's articles containing hazardous substances. Labels will be required

to warn consumers against possible injury from drugs and cosmetics. The government also expects to limit the amount of children's aspirin available in standard retail packages and require safety closure caps.

A Drug Safety Act also calls for amendments to the Federal Food, Drug and Cosmetic Act. This will require more accurate and detailed labeling of dangerous drugs, bans on the unsolicited distribution of drug samples and making it mandatory that insulin and antibiotics be certified as to strength, quality, purity and proper identity before marketing.

As a young medico I believed that laws were made to protect the majority against those unscrupulous few. The laws that are now being passed are of questionable need and if Congress continues we will be forced to support a bureaucracy, the like of which we have never seen. The acts of the unscrupulous few will be insignificant compared with those of power-hungry investigators and interpreters of the law.

T. R. Van Dellen, M.D.

... continued on page 58

ce merely a man h HAY FEVER— w a victim of his n antibodies

er term describes him in this new era of
logy, the symptoms of congested nose, rhinor-
d sneezing haven't changed in patients hyper-
e to pollens and molds. But NTZ[®] Nasal Spray
the symptoms. It decongests nasal mem-
on contact, relieves itching and reduces
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es, helps restore normal nasal ventilation
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d in convenient pocket-size plastic
ottle of 20 ml. Also available as a
of 30 ml. (1 fl. oz.) with dropper,
ml. (1 pint).

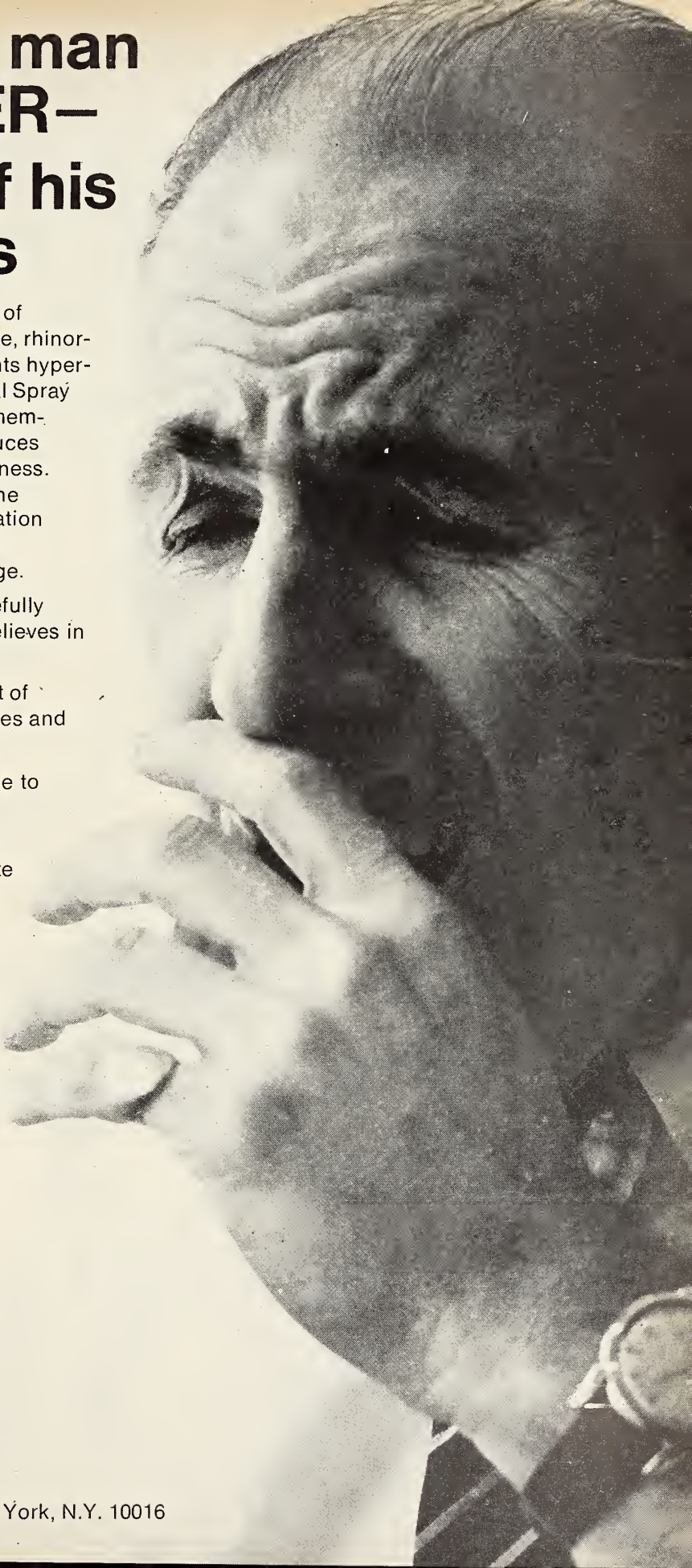
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THE AUTOMOBILE AND THE SICK CHILD

Medicine has advanced tremendously since the horse and buggy era, yet our thinking in regard to the transportation of the sick remains in that bygone period. Many parents today are still reluctant to bring their sick children to the doctor's office in inclement weather. This is especially true in winter when the mercury hovers around the zero mark. Parents point to the danger of exposure to cold and the subsequent chilling as the primary reason for not taking the sick child to the doctor. This certainly was the case in the era prior to the advent of the automobile, so wonderfully described by Arthur E. Hertzler, M.D. in his book "The Horse and Buggy Doctor." In those days taking a child with pneumonia and a high fever meant a day's journey over icy, rutted roads to and from the doctor's office in a wagon or horse and buggy unprotected from the bitter cold. This was a severe hardship for the well parents, let alone the sick child.

This writer conducted a study of temperatures within several passenger cars to determine how warm the interiors became during one of the coldest days of the winter. When the mercury was between -10 to -15 below zero the average temperature 10 minutes after starting the motor and heater was 40° above zero inside the car. After 20 minutes the average temperature rose to 64° . When the outdoor temperature was 20° above zero the car temperature after 10 minutes averaged 56° . After 20 minutes the car temperature was a comfortable 78° .

It is hoped that these findings will give aid and comfort to the parents who fear bringing their sick patient by auto to the doctor's office.

Conversely, for those parents not fortunate to have an automobile the doctor has his warm vehicle available for the needed house call.

Harvey Kravitz, M.D.

IMJ

REFERENCE ISSUE

AUGUST 1966

PARTIAL CONTENTS

ISMS Organization

ISMS Committees

ISMS Services

Legislative and Medical

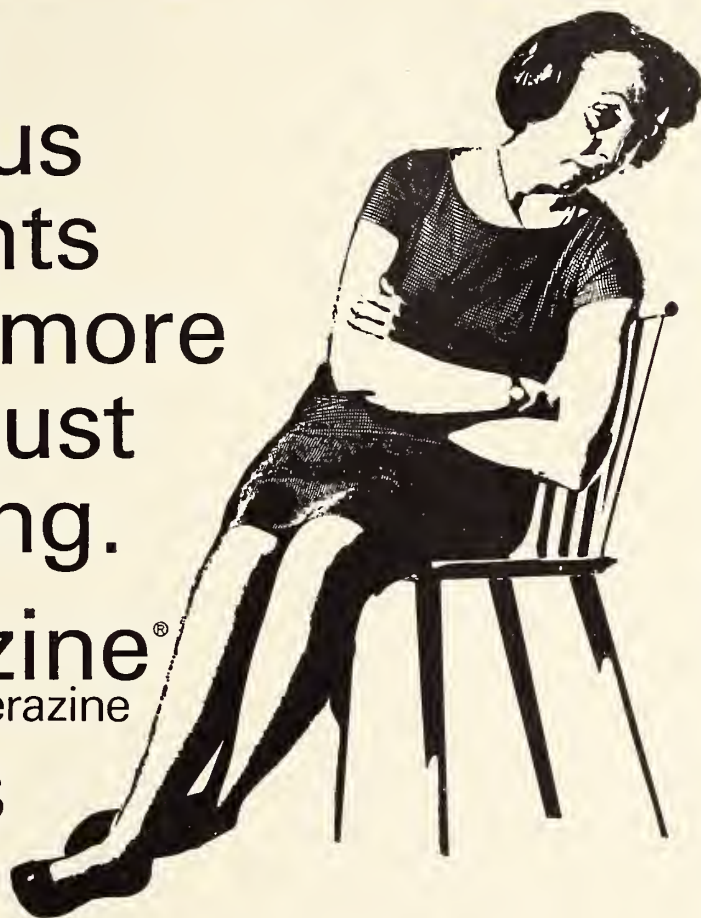
Service Organizations

Medical-Legal Information

Many
anxious
patients
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than just
calming.

Stelazine®
brand of trifluoperazine

offers
true
tranquilization.



Sedative or muscle relaxant-type tranquilizers are often all that's needed for patients with temporary situational anxiety. But in the many patients whose anxiety presents a continuing problem these agents are limited by their generalized dulling effects.

'Stelazine' can attack anxiety directly without producing annoying dulling effects. On 'Stelazine', patients can react more normally to day-to-day stress yet remain alert, able to carry on their normal activities.

Contraindicated in comatose or greatly depressed states due to CNS depressants and in cases of existing blood dyscrasias, bone marrow depression and pre-existing liver damage. *Principal side effects*, usually dose related, may include mild skin reaction, dry mouth, insomnia, fatigue, drowsiness, dizziness and neuromuscular (extrapyramidal) reactions. Muscular weakness, anorexia, rash, lactation and blurred vision may also be observed. Blood dyscrasias and jaundice have been extremely rare. Use with caution in patients with impaired cardiovascular systems. Before prescribing, see SK&F product Prescribing Information.



Smith Kline & French Laboratories, Philadelphia

THE IMAGE OF THE DOCTOR

... continued from page 7

quotes: "From 6 p.m. until 9 a.m., daily, and from Friday evening until Monday morning, the emergency rooms of the hospitals are doing all the practice of medicine."

I'm tired of listening to the criticism on the air, in newspapers, in magazines, about the doctors not wishing to make house calls. The statement is made—if you want to find a doctor on Wednesdays or Sundays, call the country club, etc. This is absolutely unnecessary criticism. The doctors today are willing to give the same care as the doctor of years ago. It isn't that they don't want to make house calls. It's just that they are also flesh and blood. They can only do so much. The average doctor today works from 70 to 80 hours a week. If you analyze this you'll find that he has very little time for relaxation, for play. I believe that this too is now remedied to a great degree because in many areas the doctors have now organized pools where a man can now leave for a weekend and his practice cared for by another man in that area. Many of us are certainly aware of the fact that the pediatricians are now practicing in this fashion. The public should be informed of this and be aware that they should call their doctors rather than to clutter the emergency rooms in the hospitals with cases that are not emergencies, but rather that belong in a doctor's office.

Another reason why many of the doctors feel that house calls are unnecessary: the doctor feels that today with all the new equipment and his increased knowledge, he can give the patient better service in the office, or certainly at the hospital. There is not much, in most instances, that he can do at home. I feel that many of these house calls are a waste of effort and time. If I were having a coronary attack, I would certainly prefer to be taken to a hospital, to an intensive care unit, where oxygen and monitoring, and good nursing, and other facilities are available.

Another reason why the image of the doctor is lower, is the fact that we fail to more adequately inform the public that medicine and the medical society has grievance and ethical relations committees to

... continued on page 74

Miltown® (meprobamate)

Indications: Meprobamate is effective in relief of anxiety and tension states. Also as adjunctive therapy when anxiety may be a causative or otherwise disturbing factor. Although not a hypnotic, meprobamate fosters normal sleep through both its anti-anxiety and muscle-relaxant properties.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate or meprobamate-containing drugs.

Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Usual adult dosage: One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

Supplied: 'Miltown' (meprobamate) is available in two strengths: 400 mg. scored tablets and 200 mg. coated tablets. 'Mepro-tabs' (meprobamate) is available as 400 mg. white, coated, unmarked tablets. CM-18

Before prescribing, consult package circular.



WALLACE LABORATORIES / Cranbury, N. J.

NEW PHARMACEUTICAL SPECIALTIES

by Paul deHaen*

For detailed information regarding indications, dosage, contraindications and adverse reactions, refer to the manufacturer's package insert or brochure.

New Single Chemicals—Drugs not previously known, including new salts.

Duplicate Single Products—Drugs marketed by more than one manufacturer.

Combination Products—Consisting of two or more active ingredients.

NEW SINGLE CHEMICALS

OVULEN: Oral Contraceptive B

Manufacturer: G. D. Searle & Co.

Composition: Ethynodiol diacetate 1.0 mg. with mestranol 0.1 mg.

Indications: Inhibition of ovulation.

Dosage: Cyclically, one tablet daily, beginning on the fifth day of menstrual cycle for 20 days.

Supplied as: Boxes of 6 and 30. Compact dispensers of 20. Refills available.

BIOLOGICALS

ANTIHEMOPHILIC FACTOR

(Human) Dried B

Manufacturer: Hyland Laboratories

Composition: Concentrate of factor VIII or antihemophilic factor (AHF) from human blood plasma.

Indications: Treatment for hemophilia.

Dosage: 30 ml vial of AHF concentrate equals about 250 ml of plasma in AHF activity. As indicated by age, weight and condition.

Supplied as: 30 ml vial with reconstituting fluid and complete administration equipment.

NEW COMBINATION PRODUCTS

ANDROID/ESTROGEN: Androgen-Estrogen Combination B

Manufacturer: The Brown Pharmaceutical Co.

Composition: Methyltestosterone 2.5 mg.
Thyroid Ext. 10.0 mg.
Glutamic Acid 50.0 mg.
Thiamine HCl 10.0 mg.
Ethynyl Estradiol 0.02 mg.

Indications: Treatment of fatigue, postoperative and debilitating disease, osteoporosis.

Dosage: One tablet 3 times a day. Female patients should have a 5-7 day rest period after 21 days of medication.

Supplied as: Tablets. Bottles of 100, 500, 1000.

Side effects and adverse reactions: The transitory drowsiness which occurs with hydroxyzine HCl usually disappears spontaneously with continued therapy, or is correctable by dosage reduction. Dryness of the mouth may be seen with higher doses. Decreased motor activity, including rare instances of tremor and ataxia, has been reported, usually on higher than recommended dosage. **Hydroxyzine HCl may potentiate barbiturates, such as meperidine, and other CNS depressants.** In consequence, dosage for these drugs should be decreased as much as possible because drowsiness may occur, patients should be cautioned against driving a car or operating dangerous machinery.

Solution Precautions and contraindications: This dosage is intended only for I.M. or I.V. administration and, under any circumstances, be injected subcutaneously. When the usual precautions for I.M. injection are followed, reports of soft tissue reactions have been infrequent. If used intravenously, if given undiluted, minimal amounts (2-3 grams of liberated hemoglobin) will occur. If 50 cc. of normal saline and given during a period of 15 minutes or more, this phenomenon does not occur. Due to the infrequent phlebitis, the rate of injection must not exceed 1 mg. per minute. A single I.V. administration in excess of 100 mg. is not recommended. Particular care should be used to inject only into intact veins; a few instances of digital necrosis occurring distal to the injection site have been attributed to intra-arterial injection or periarterial extravasation of which should be avoided. **Use in Pregnancy:** When administered to rats at high dosage, hydroxyzine induced fetal resorptions. Until human clinical data are available adequate safety in early pregnancy, hydroxyzine is contraindicated in pregnancy.

ANDROID-X: High Potency Androgen-Estrogen R
Manufacturer: The Brown Pharmaceutical Co.
Composition: Methyltestosterone12.5 mg.
 Thyroid64.0 mg.
 Glutamic Acid50.0 mg.
 Thiamine HCl10.0 mg.

Indications: Androgenic Deficiency.

Dosage: One or two tablets daily.

Supplied as: Tablets. Bottles of 60, 100, 1000.

ENGRAN-HP: High Potency Vitamin-Mineral Prenatal Supplement R

Manufacturer: E. R. Squibb & Sons, Inc.

Composition: Vitamin B-625.0 mg.
 C100.0 mg.
 A6,000 u.
 D400 u.
 B-13.0 mg.
 B-23.0 mg.
 B-122.0 mcg.
 Folic Acid1.5 mg.
 Niacinamide20.0 mg.
 Ca Pantothenate5.0 mg.
 Plus 7 Minerals.

Indications: Vitamin-mineral dietary deficiency during pregnancy and lactation.

Dosage: One tablet daily or as indicated.

Supplied as: Tablets. Bottles of 100.

ENGRAN-HP w/Fluoride: High Potency Vitamin-Mineral Prenatal Supplement R
 w/Fluoride R

Manufacturer: E. R. Squibb & Sons, Inc.

Composition: Fluoride ion (as Sodium Fluoride)0.5 mg.
 Vitamin B-625.0 mg.
 C100.0 mg.
 A6,000 u.
 D400 u.
 B-13 mg.
 B-23 mg.
 B-122 mcg.
 Folic Acid1.5 mg.
 Niacinamide20.0 mg.
 Ca Pantothenate5.0 mg.
 Plus 7 Minerals.

Indications: Vitamin-Mineral deficiency during pregnancy and lactation in areas where drinking water is substantially devoid of fluoride.

Dosage: One tablet daily or as indicated.

Supplied as: Tablets. Bottles of 100.

FERANCEE: Iron and Vitamin C o-t-c

Manufacturer: The Stuart Company

Composition: Iron (From 3.1 gr. ferrous fumarate)67 mg.
 Ascorbic acid150 mg.

Indications: Iron deficiency anemias.

Dosage: Adult: 2 tablets daily; children over 6 years: one tablet daily; may be taken between meals or as directed.

Supplied as: Chewable tablets. Bottles of 100.

PREGSLIDE: Test for Determination of Pregnancy.

Manufacturer: Wampole Laboratories

Composition: Two-minute slide test of urine for early detection of pregnancy. Based on principle of latex agglutination. High sensitivity to human chorionic gonadotropin (approx. two units/ml).

Indications: Detection of pregnancy.

Usage: Use as indicated.

Supplied as: Sets of 30 tests.

NEW DOSAGE FORMS

ERYTHROCIN-SULFAS CHEWABLE

Antibiotic-Sulfas Combination R

Manufacturer: Abbott Laboratories

Composition: Erythromycin ethyl succinate equivalent to erythromycin125 mg.
 Sulfadiazine167 mg.
 Sulfamerazine167 mg.
 Sulfamethazine167 mg.

Indications: Infections more susceptible to the combination than to either agent alone; usually found in urinary, lower respiratory tract, and chronic ear infections.

Dosage: Infants and children: ½ tablet every four hours to 2 tablets every six hours. In proportion to age and weight.

Supplied as: Chewable tablets. Bottles of 50.

ERYTHROCIN-SULFAS GRANULES

(For Oral Suspension) Antibiotic-Sulfas Combination R

Manufacturer: Abbott Laboratories

Composition: Each 5 cc. contains:

Erythromycin ethyl succinate equivalent to erythromycin125 mg.
 Sulfadiazine167 mg.
 Sulfamerazine167 mg.
 Sulfamethazine167 mg.
 with 200 mg. sodium citrate as a buffer.

Indications: Infections more susceptible to the combination than to either agent alone; usually found in urinary, lower respiratory tract, and chronic ear infections.

Dosage: Infants and children: ½ to 2 teaspoonfuls every 6 hours. In proportion to age and weight.

Supplied as: 60 ml. and 150 ml. bottles for oral suspension.

LINCOCIN

(Pediatric Drops) Antibiotic R

Manufacturer: The Upjohn Company

Composition: Each 5 cc. contains: Lincomycin base250 mg.

Indications: Infections caused by Gram-positive organisms such as staphylococci, streptococci and pneumococci that are sensitive to its action.

Dosage: Children (over 1 month of age): 15 mg./lb./day to 30 mg./lb./day, three or four times a day or as indicated.

Supplied as: Pediatric Drops 30 cc. bottle with dropper.

Tar Gard Smoking Machine



Tar Gard and filter cigarette



tar trapped in Tar Gard*
after only four filter cigarettes

as featured at the 126th Annual Convention Illinois State Medical Society

At the Annual Convention, the efficiency of Tar Gard was dramatically demonstrated by means of a smoking machine. The machine, complete with Tar Gard unit and filter cigarette, was set to simulate an average smoking pattern. When attending physicians witnessed the amount of tar trapped by Tar Gard, the general reaction was "if only my patients could see this, it might help convince them to stop smoking."

Get Tar Gard help. If you have not yet received a

complimentary Tar Gard, send for a free professional sample. When your patients see the amount of tar trapped in Tar Gard and realize that normally this would stay in the mainstream of the smoke—the smoke they inhale—this could prove to be the most dramatic visual proof of the health hazards of smoking you could show them... enough to convince them to quit.

Complete and mail coupon for your free professional sample of Tar Gard:

*Technically, Tar Gard is not a filter. It is a patented tar trapping device based on the principle of the Venturi tube, such as is employed in the bedside respirator used in critical respiratory management, the vaporizer and the aspirator. In Tar Gard, as cigarette smoke is drawn into the mouthpiece, the pressure energy of the tar-filled smoke is accelerated (to approximately 200 mph) and then stopped abruptly by an impingement barrier, where tars are trapped.

Tar Gard Company, 2 Pine St., San Francisco, California 94111

☐ Please send me free professional Tar Gard demonstration unit.

☐ Please send me _____ doz. regular Tar Gard retail units at special professional price of \$10.00 per 1/2 doz.: minimum order. (\$1.67 each—usually retails at \$2.95).

☐ Check enclosed.

☐ Please bill me.

Name _____

Type of Practice _____

Address _____

City _____ State _____ Zip _____

TAR GARD.

**ILLINOIS
MEDICAL
ASSISTANTS
ASSOCIATION
REPORT**



AWARDS FROM IMAA

Mrs. Ethyl Haase received the 1966 Distinguished Service Award at the annual meeting of the Illinois Medical Assistants Association in Bloomington on April 23. She is a co-founder and president—in 1961—of the Chicago Medical Assistants Association. She was president of the Illinois Medical Assistants Association in 1962 and has served on almost every committee on the local and state level during the past 10 years. She has also served on AMAA's membership and education committees and will be the Installing Officer at the AMMA convention in St. Louis. Mrs. Haase is employed by Drs. Frederick Stiegmann, J. Robbins and A. Robbins.

Honorable Mention Certificates were presented to Mrs. Anna Newingham of Peoria and Miss Lina Trotter of DeKalb for their outstanding contributions on the local and state level.

Awards were given to the chapters having the greatest number of new members and the greatest percentage increase for the year. Cook County won first place for

new members, followed by St. Clair and a four-way tie for third place among DuPage, Kane, Sangamon and Winnebago Counties.

First place for percentage increase went to St. Clair County with DuPage second and DeKalb third. All of these chapters are to be congratulated on the fine work they are doing for IMAA.

Mrs. Synobia Payne, president-elect of IMAA, addressed the House of Delegates on Sunday, May 15. She gave a progress report of IMAA's growth in stature, effectiveness and achievement during the past year and extended the Association's gratitude to Illinois physicians for their continued support and assistance.

IMAA's booth at the Illinois State Medical Society annual meeting, May 15-18, was manned by members from Cook, DuPage, McHenry and DeKalb Counties. More than 100 physicians stopped at the booth to request information on the organization and its requirements for membership.



It's Going to Be Crowded...

at the AMA meeting in Las Vegas in November!

So, ISMS has arranged a package deal for you. The package includes jet fare round trip from Chicago to Las Vegas, plus three nights at Caesar's Palace or the Stardust Hotel (double occupancy). Travel is via Capital Airways DC-8 jet, with transfers included. The flight out includes lunch; the one back dinner. This is a single class flight and seats will be assigned as reservations are received.

ALL FOR \$189.00

(Families of members eligible at same rates)

Schedule: Depart O'Hare Field, 11 a.m. Sunday, Nov. 27

Depart Las Vegas, 7 p.m. Wednesday, Nov. 30

Most airlines are already sold out for this meeting so take advantage of this plan. Because of the demand for airline reservations we must have yours early to guarantee your seat.

Deadline for reservations is August 15; a \$100 deposit will hold your place until Sept. 15 when the balance is due. Send the coupon below with your check now.

Illinois State Medical Society

360 N. Michigan Ave.

Chicago, Ill. 60601

Please make.....reservations for me on the flight to Las Vegas. I am including a check for \$..... as a deposit.

Name

Address

LOOKING FOR A PLACE TO PRACTICE?

PLACEMENT SERVICE LISTS OPENINGS

Following is a sample of the more than 150 openings for general practitioners listed with the Illinois State Medical Society's Physicians' Placement Service. Interested physicians who register with the service will be provided with a complete list of openings. Inquiries and comments should be directed to: Mrs. Robert Swanson, Secretary, Physicians' Placement Service, Illinois State Medical Society, 360 North Michigan Avenue, Chicago 60601, SState 2-1654.

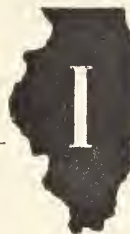
CLINTON COUNTY: New Baden; population: 1600. Estimated population of trade area: 3,000. One elderly physician, urgent need for a second. Several hospitals within 16 miles. 32 miles from St. Louis, Missouri. No drug stores. Ambulance service provided by funeral home. New Marshall-Erdman office building; ready to be occupied by physician and dentist. Office rental free for 6 months; graduated scale thereafter. Predominant nationality: German. Agricultural area. Many residents employed at nearby Scott Air Force base. Churches: Catholic, Methodist and United Church of Christ. Schools: 2 grade, 1 junior high; community unit 4 miles away; bus service provided. Organizations: Chamber of Commerce, Lions Club, American Legion, Womans Club, etc. Limited recreational facilities. Survey conducted by Sears Roebuck Foundation indicated that community could support a physician well.

ADAMS COUNTY: Golden; population 491; estimated population of the trade area: 2500. Community without a physician for 4 years; only physician died. Nearest physicians at Clayton, Bowen, Augusta and Quincy, 9, 10, 13, and 32

miles. Two physicians within 10 miles. Nearest hospital at Quincy, 32 miles. Population: 43,300. No local drug store. Ambulance service provided by local funeral home. Railroad passenger service. Houses available; some practically new. Selling range—\$6,000-\$12,000. Financial assistance available. Many citizens of German descent. Agricultural community. Churches: 3 Lutheran and 1 Methodist. Schools: 2 grade, 1 consolidated (bus service provided; 2½ miles). Nearest colleges at Carthage, 27 miles and Western Illinois University, 40 miles. Organizations: Lions, American Legion, Church Brotherhoods, etc. Nearest golf course, 14 miles. 42 bed nursing home in operation. Deceased physician practiced here for 56 years; had a lucrative practice.

LASALLE COUNTY: Mendota. Population: 6,714. Population of trade area: 24,000. Several small towns in trade area without physicians. 6 practicing physicians; one is leaving July 1, 1966 to take a residency; replacement needed. Mendota Community Hospital—70 beds. Nearest large city, Rockford, population 131,000—50 miles. 3 prescription drug stores. A newly constructed medical building is available July 1, 1966 on a rental basis—fully equipped. M. Erdmann, architect. Designed for two physicians; occupied by one. Equipment of physician who is leaving available if desired. Predominant nationality—German. Sources of income: agriculture and industry. 11 Catholic and Protestant churches. Grade and high schools. Organizations include Elks, Kiwanis, Moose, Lions, Rotary, VFW, Masons, BSA, Chamber of Commerce, Newcomers, etc. Recreational facilities include 9 hole golf course, new swimming pool and tennis courts. Rapidly expanding industries in town.

NEWS and ANNOUNCEMENTS



Societies Elect New Officers

The following new officers of the Chicago Pediatric Society were recently elected: Howard S. Traisman, M.D., president; Arthur W. Fleming, M.D., vice-president; Paul C. Tracy, M.D., secretary; John S. Hyde, M.D., treasurer; Lawrence Breslow, M.D., editor; Mila I. Pierce, M.D., Joseph R. Christian, M.D., and Harry L. Faulkner, M.D., executive committee.

At the annual meeting of the Chicago Society of Internal Medicine, these new officers were elected: Theodore B. Schwartz, M.D., president; David P. Earle, M.D., vice-president; Theodore N. Pullman, M.D., secretary-treasurer; Peter J. Talso, M.D., Leon O. Jacobson, M.D. and Walter A. Rambach, M.D., executive committee.

Institute of Medicine Offers Annual Prize

The Institute of Medicine of Chicago is offering an annual prize of \$750 for the most meritorious research in medicine or in the specialties of medicine carried on in 1966. The investigation may be also in the fundamental sciences, provided the work has a definite bearing on some medical problem.

Competition for 1966 is open to graduates of Chicago medical schools who completed their internship or one year of laboratory work within a period of five years prior to January 1, 1966, excluding their terms of service in the Armed Forces.

Manuscripts must be submitted to the Secretary of the Institute of Medicine of Chicago not later than November 15, 1966.

An abstract of the prize winning paper will be published in the *Proceedings of the Institute of Medicine of Chicago*.

If no paper submitted is deemed worthy of the prize, the award may be withheld at

Excuse Us Please!



In the June issue we ran the above photo showing Dr. O. W. Pfister (right) presenting a check from the Randolph County Medical Society to Dr. Burtis E. Montgomery for the ISMS Educational and Scientific Foundation. We incorrectly listed the amount of the check as \$200—it should have read \$600. The Society also gave a check for \$600 to the AMA-ERF.

the discretion of the Board of Governors.

The prize was founded by Dr. and Mrs. Edwin R. LeCount, Benefactors.

Pioneer in Brain Research Honored by American Academy of Achievement

Dr. Frederic A. Gibbs, professor of neurology at the University of Illinois College of Medicine, known as a pioneer in brain research, was honored by the American Academy of Achievement at the June 18 Banquet of the Golden Plate in Dallas, Texas.

The Golden Plate Award is presented annually to approximately 50 national guests of honor who have demonstrated

continued on page 75

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THE IMAGE OF THE DOCTOR

... continued from page 60

which they may, and have freedom, to appeal. The public should know that when there is a problem between patient and doctor, or a little misunderstanding, or a little controversy, that this could be resolved very quickly and easily, if this complaint or problem is referred to the proper channels of the medical society.

The public must be informed also that hospital medical staffs, through their many committees, such as the records committee, tissue committee, utilization committee and credentials committee, does supervise its activities in the hospital to make sure that good medical care is provided to the patient. The public must be made to understand that we have such facilities to discipline ourselves.

This criticism which I have heard and read over and over again, that the indications for an appendectomy is simply a patient and a fee of several hundred dollars, or, that many operations are being done unnecessarily. Let the medical profession assure the newspapers, the radio and television media, that this cannot happen in any accredited hospital, because the Tissue Committee would certainly find out mighty soon if this appendix was removed unnecessarily, or any other operation was done unnecessarily. We are in a position to tell the public that medicine today is practiced on a very high level. That there is no room for criticism that is unfounded.

Yes, the image of the doctor can be improved, and we as a medical society should make every effort to do so. Every individual doctor who is a member of his state medical society has the burden, the responsibility, to practice medicine the way it is outlined in our ethics, in our Hippocratic oath, and in the tradition of our lofty profession. By doing this, by practicing medicine properly, by informing the public of all that medicine does, by informing the public of the services that we offer to the public, by letting them know that we are always ready and willing to accept the work load and the responsibility of maintaining the health of this country, at the highest level. By doing so, eventually, our image will be greatly improved.

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Keep Up-to-date With Latest Recordings

The major addresses of the recent Illinois State Medical Convention were recorded on Magnetic tape and are available through Argus Audio Publishing Company.

Each recorded event covers up to three hours and is contained on an 1800 ft. reel. The following programs were recorded: Surgery, Neurology & Psychiatry, Allergy, Physical Medicine, Pediatrics and Chicago Medical School Mental Health Program.

Single, seven inch reels may be purchased for \$3.20 each. However all six are sold for only \$15.00. These tapes can be obtained from Argus Audio Publishing Company, 3505 N. Ashland Ave., Chicago, Illinois 60657.

NEWS and ANNOUNCEMENTS

(cont'd)

exceptional accomplishment in the sciences, professions, arts, business, and public service. The Academy, whose primary aims are the inspiration of youth and recognition of exceptional achievement, singles out individuals not only for their own outstanding contributions, but also to pay tribute to them as representatives of their many colleagues who excel.

Dr. Gibbs and his wife Erna L. Gibbs are known for their research on the prevention and cure of brain disorders as well as their help in organizing the Consultation Clinic for Epilepsy at the University of Illinois Medical Center Campus in Chicago. In 1956, they received a Distinguished Service Award from the Illinois Interprofessional Council which is composed of professionals in the health sciences.

Dr. Gibbs, who received his M.D. from the Johns Hopkins University and his A.B. from Yale University, helped found the

Brain Research Foundation in 1953 and the Department of Pediatrics Neurology at the Children's Memorial Hospital, both in Chicago. He has received Meade Johnson and Lasker awards, and is the author of over 125 papers and four books.

Illinois Society of Internal Medicine Names New Officers

Wright R. Adams, M.D., has been named President-Elect of the Illinois Society of Internal Medicine. Dr. Adams is Chief of Staff, University of Chicago Clinics and Associate Dean, Division of Biological Sciences.

Assuming office as President for 1966-67 is E. Richard Ensrud, M.D., Urbana; Mervin Shalowitz, M.D., Skokie, was re-elected Secretary-Treasurer.

Each of ISIM's new officers has been certified by the American Board of Internal Medicine and is a fellow of the American College of Physicians.

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 BASIC PRINCIPLES IN GENERAL SURGERY, Two Weeks, July 11
 PRINCIPLES OF OPERATIVE SURGERY, Two Weeks, July 25
 PROCTOSCOPY & VARICOSE VEINS, One Week, August 15
 SURGERY OF STOMACH & DUODENUM, One Week, September 19
 FLUIDS AND ELECTROLYTES, One Week, September 12
 SURGERY OF FACE, MOUTH & NECK, One Week, September 19
 SURGERY OF THE HAND, One Week, September 12
 FRACTURES & TRAUMATIC SURGERY, Two Weeks, September 26
 GYNECOLOGY, Two Weeks, September 12
 ADVANCES IN GYNECOLOGY & OBSTETRICS, One Week, September 26
 PEDIATRIC SURGERY, One Week, October 3
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ACP Honors Local Physicians

Illinois physicians were among those honored at the 47th annual session of the American College of Physicians when they were inducted into Fellowship in the 13,000-member society.

The Illinois Fellows inducted were Drs. Richard L. Worcester, Alton; Frank Carter, Arlington Heights; Albert Van Ness, Bloomington; David M. Berkson, Edward Bigg, Imre E. Horner, Herman A. Levy, Joseph J. Muenster, Joseph R. Nora, Robert V. Pierre, S. Frederick Rabiner, Aaron M. Rosenthal, Henry P. Russe, Maurice A. Schwartz, Harold B. Shrifter, Leonard S. Sluzynski, H. Ivan Sippy and Earl A. Vondrasek, Chicago; William F. Maloney, Evanston; Dei J. Chang, Freeport; Philip K. Jones, Kenilworth; and George H. Berryman, Wilmette.

Grants

A total of \$520,296 in grants has been accepted by the University of Illinois at the Medical Center Campus in Chicago during February 9, 1966 to March 4, 1966. Thirteen grants amounting to \$419,913 were awarded by the United States Public Health Service.

The College of Medicine received \$360,450 and the College of Dentistry, \$159,846.

The largest single grant, awarded by the United States Public Health Service, was for \$115,763 to Dr. James A. Yaeger, associate professor of histology, for the study of "Hard Tissue-Soft Tissue Interfaces in Teeth and Bones."

The Avalon Foundation recently announced a grant of \$100,000 to the Loyola University Stritch School of Medicine to assist in the construction of the first two units of a new medical center in the Chicago metropolitan area. Including the appraised value of a new site at Hines, Illinois, the cost of the two units—a medical school building and a 450-bed hospital—is estimated at \$34,500,000. Construction is under way.

The new facilities will permit a 23% expansion in the number of entering medical students, a 33-1/3% increase in the number of students enrolled in the degree

program of the University's School of Nursing and the institution of program for the training of a variety of paramedical personnel.

The grant is an expression of the Foundation's special interest in education, health and medicine and of its recognition of the deficiency in manpower in these branches of human activity in an era of critical national need.

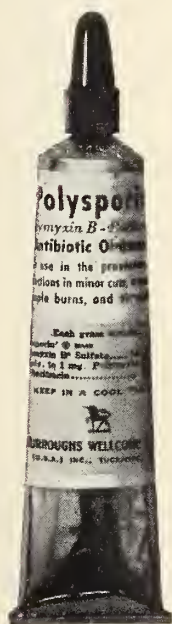
Twenty Clinics for Crippled Children Listed for August

Twenty clinics for Illinois' physically handicapped children have been scheduled for August by the University of Illinois, Division of Services for Crippled Children. The Division will count thirteen general clinics providing diagnostic orthopedic, pediatric, speech, and hearing examination along with medical, social, and nursing service. There will be six special clinics for children with cardiac conditions and rheumatic fever, and one for children with cerebral palsy. Clinicians are selected

from among private physicians who are certified Board members. Any private physician may refer to or bring to a convenient clinic any child or children for whom he may want examination or consultative services.

- | | |
|-----------|---|
| August 3 | Alton Rheumatic Fever & Cardiac—Alton Memorial Hospital |
| August 3 | Hinsdale—Hinsdale Sanitarium |
| August 3 | Aurora—Copley Memorial Hospital |
| August 4 | Lake County Cardiac—Victory Memorial Hospital |
| August 9 | Peoria General—Children's Hospital |
| August 9 | East St. Louis—St. Mary's Hospital |
| August 10 | Champaign-Urbana—McKinley Hospital |
| August 11 | Springfield General—St. John's Hospital |
| August 12 | Chicago Heights Cardiac—St. James Hospital |
| August 12 | Evanston—St. Francis Hospital |

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- August 17 Carlinville—Carlinville Area Hospital
- August 17 Chicago Heights General—St. James Hospital
- August 18 Effingham Rheumatic Fever & Cardiac—St. Anthony Memorial Hospital
- August 18 Rockford—Rockford Memorial Hospital
- August 18 Bloomington — St. Joseph's Hospital
- August 18 Elmhurst Cardiac — Memorial Hospital of DuPage County
- August 23 Peoria General — Children's Hospital
- August 24 Springfield Cerebral Palsy (P.M.) — Memorial Hospital
- August 26 Chicago Heights Cardiac—St. James Hospital

The Division of Services for Crippled Children is the official state agency established to provide medical, surgical, corrective, and other services and facilities for diagnosis, hospitalization and after-care for children with crippling conditions or who are suffering from conditions that may lead to crippling.

Appointments

Dr. William Sladek has been elected 1966-1967 president of the University of Illinois Medical Alumni Association.

Representing over 6,000 physicians who have graduated from the University of Illinois College of Medicine in Chicago, Dr. Sladek, who earned his M.D. degree in 1933, has served as president-elect of the association for the past year.

President-elect for 1966-1967 is Dr. Gilbert White, Jr., a 1951 graduate.

First vice-president for the coming year is Dr. Philip G. Thomsen, a 1934 graduate.

Second vice-president is Dr. Earl C. Bucher, also Class of 1934. Dr. Louis R. Limarzi, a 1930 graduate, is secretary-treasurer.

Councilors elected to fill four vacancies in the board and serve until 1969 are: Dr. Max M. Montgomery, a 1929 graduate; Dr. Armand Littman, Class of 1943; Dr. Carl A. Hedberg, Class of 1926; and Dr. Fred Shapiro, Class of 1929.

The Board of Trustees of Presbyterian-St. Luke's Hospital has appointed John S. Graettinger, M.D., chairman of the hospital's Division of Medicine. He is an attending physician and director of the Section of Cardio-respiratory Diseases at the hospital.

Dr. Graettinger joined the staff of Presbyterian Hospital in 1953. He attended Harvard College and received his M.D. degree from Harvard Medical School in 1945. His internship and residency were both served on the Harvard Medical Service of Boston City Hospital.

Currently holding the rank of professor of medicine at the University of Illinois College of Medicine, Dr. Graettinger has also held teaching positions at Harvard Medical School and the U.S. Naval School of Aviation Medicine.

He is a director and member of the research committee of the Chicago Heart Association.

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OBITUARIES

William E. Anspach*, Riverside, died May 26, aged 74. A graduate of Northwestern University Medical School in 1915, he specialized in radiology. He served on the staffs of Children's Memorial and St. Joseph's hospital. He was a member of many medical organizations including the American College of Radiology and the Chicago Roentgen society. He was also a member of the Fifty Year Club of ISMS.

Hillier L. Baker*, Chicago, died May 1, aged 79. A graduate of Rush Medical College in 1915, he specialized in general surgery. He was an emeritus member and a member of the Fifty Year Club of ISMS.

John F. Carey, Joliet, died May 20, aged 68. A graduate of Northwestern University Medical School, he specialized in pediatrics.

Louis Chabner*, Shelbyville, died June 5, aged 55. He was a graduate of the University of Illinois College of Medicine in 1936.

Thomas J. Flatley*, Moline, died May 25, aged 85. A graduate of Milwaukee Medical College in 1908, he was the oldest practicing physician and first ENT specialist in Rock Island County. He was a fellow in the American Academy of Ophthalmology & Otolaryngology in 1914 and an honorary staff member of Moline Public Hospital. He retired in 1961 and was an emeritus member and a member of the Fifty Year Club of ISMS.

Armando Hernandez, Franklin Park, died February 6, aged 41. He was a graduate of Universidad de la Habana Facultad de Medicina y Farmacio, Cuba, in 1948.

Ola A. Kabrick, Hull, died March 29, aged 85. He was a graduate of Keokuk (Iowa) Medical College, College of Physicians & Surgeons, in 1906.

Bernard J. Kuly*, Springfield, died May 19, aged 71. A graduate of the University of Illinois

College of Medicine in 1916, he retired in 1949. He was a member of the Fifty Year Club of ISMS.

Clarence W. Magaret*, Peoria, died June 19, aged 74. A graduate of Rush Medical College in 1920, he was past-president of Peoria Medical Society and Proctor Hospital Medical staff.

Laurence M. Marsh*, Rockford, died June 12, aged 58. A graduate of Rush Medical College in 1937, he specialized in General Surgery. He was a member of the American Fracture Society.

James H. McIlwain*, Okawville, died June 1, aged 95. He was a graduate of Marion-Sims College of Medicine, St. Louis, in 1894. He was an emeritus member and a member of the Fifty Year Club of ISMS.

Frederick E. Munch*, Chicago, died June 3, aged 85. A graduate of Northwestern University Medical School in 1907, he retired in 1963. He was an emeritus member of ISMS.

Ray H. Petty*, Mount Carroll, died May 11, aged 78. A graduate of the University of Illinois College of Medicine in 1913, he practiced for over 50 years. He had served as president of the Carroll County Tuberculosis Association and was a member of the Fifty Year Club of ISMS.

Julius P. Schoenebaum*, Quincy, died May 11, aged 67. He was a graduate of Medizinische Fakultät der Universität Heidelberg, Baden-Württemberg, in 1926.

James L. Sparling, Moweaqua, died June 9, aged 89. A graduate of Northwestern University Medical School in 1910, he retired in 1964.

Walter R. Tobin, Florida, formerly of Chicago, died June 9, aged 70. A graduate of Loyola University School of Medicine in 1928, he specialized in internal medicine. Doctor Tobin was a heart specialist on the staffs of Presbyterian-St. Luke's, Roseland Community and Walther Memorial hospitals.

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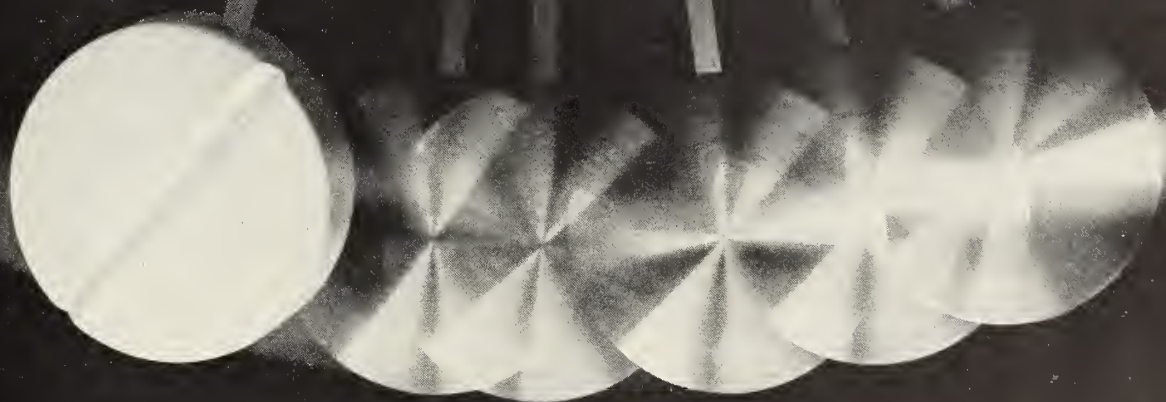
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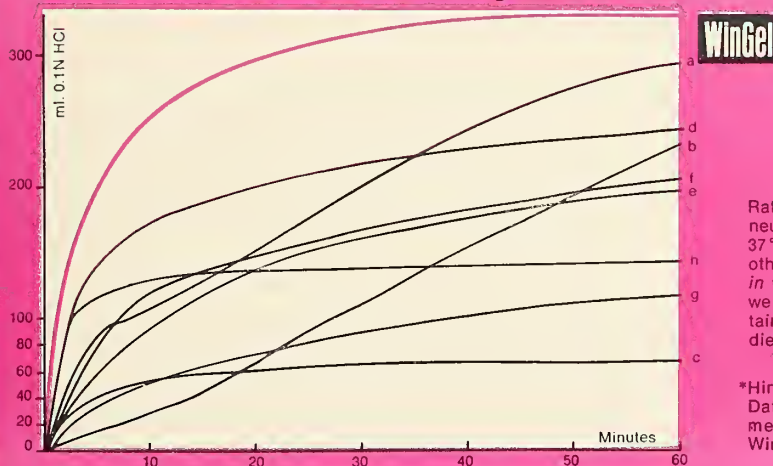
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ABSTRACTS OF BOARD ACTIONS

MEETINGS OF JULY 23-24, 1966

NOTE: Members of the ISMS House of Delegates and officers of county medical societies receive the detailed minutes of Board meetings. No attempt is made in these abstracts to cover all actions of the Board—only the more important ones of general interest to the profession.

POSITIVE P. R. PROGRAM OVERCOMES CRITICISM

Dr. Paul P. Youngberg, 4th District Trustee, reported that the Rock Island County Medical Society, utilizing the services of the ISMS Public Relations Division, had turned an unpleasant local situation into an all-media promotion of the medical profession. Newspaper, radio and television criticism of doctors for allegedly neglecting hospital emergency room service has been replaced by a full-blown campaign in all media explaining the contributions of physicians in the community. Newspaper feature stories, radio and television interviews with doctors, and posters have been used to tell organized medicine's story. Participants recommend that similar positive programs be initiated in other parts of the state.

SURVEY OF USUAL AND CUSTOMARY FEES APPROVED

On recommendation of the Committee on Usual and Customary Fees, the ISMS Board of Trustees has approved a survey among its members to determine the range of their charges so that the Illinois Department of Public Aid can move to establish a policy of physician reimbursement at 100 percent of usual and customary fees for 90 percent of participating physicians. According to Committee Chairman Philip Thomsen, M.D., the Department of Public Aid cannot agree to pay usual and customary fees until it knows what impact this policy will have on the department's budget. He emphasized that the survey would in no way establish a fixed fee schedule.

OLNEY CONTROVERSY INVESTIGATED

Dr. William H. Schowengerdt, 8th District Trustee, told the Board of Trustees that his district's Ethical Relations Committee has made an exhaustive study of the physician-pharmacist controversy in Olney which Life magazine reported at length in a recent issue. He said that he had met with the committee in Olney to discuss the situation in the Weber Clinic there and that Dr. Mack Hollowell, chairman of the district committee, would have a detailed report of the investigation in the near future. It was suggested that ISMS representatives be present when the Hart Committee in Washington takes up the subject.

TEMPORARY EXTENSION OF DEPENDENTS CARE PROGRAM VOTED

The present contract with the Surgeon General providing for ISMS participation in the Dependents Medical Care program has been extended for 90 days and will not be renewed when it expires in October. The action followed a recommendation that the Society not accept a "schedule of allowances" required in the contract. The Committee on Usual and Customary Fees said such a schedule is not in keeping with the instructions of the House of Delegates and Board of Trustees regarding fixed fees.

COMMUNITY HEALTH WEEK ANNOUNCED

Dr. Leo P. A. Sweeney, chairman of the Public Relations Committee, announced that Television Star Lorne Greene would serve as honorary chairman of Community Health Week Oct. 16-22. He will join ISMS, the Illinois Jaycees, and the Illinois Council of Voluntary Health Agencies in promoting this year's theme, Health Careers.



Foreword

IN AUGUST THE annual reference issue of the Illinois Medical Journal is mailed to the membership of the Illinois State Medical Society. Officers and staff have incorporated in this issue as many pertinent subjects as possible to assist the average member during the year.

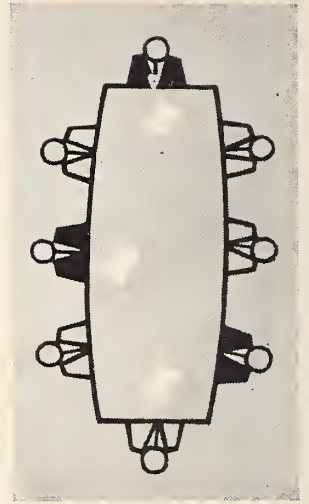
Suggestions have been received which resulted in careful editing, supplementary material being submitted, and those items included being changed to provide the most important data possible.

Improving the reference issue is a continuous

project. Please feel free to contact the officers, trustees or members of the headquarters staff to make suggestions for the improvement of this service and for the 1967 issue.

A handwritten signature in cursive script that reads "Caesar Portes M.D.".

CAESAR PORTES, M.D.
PRESIDENT



ISMS ORGANIZATION

History of Founding and Expansion

TWENTY-NINE PHYSICIANS met in Springfield June 4, 1850, to organize on a permanent basis the Illinois State Medical Society, which had been started informally 10 years earlier. The founders were concerned with the solution of ethical, scientific, legislative and economic problems. The first Constitution and Bylaws and the first Code of Medical Ethics were adopted; the first legislative committee was appointed, and a resolution outlining the beginnings of interprofessional relations was approved.

The Legislative Committee was instructed to "memorialize the legislature at its next session, praying the enactment of a statute providing for the registration of Births, Deaths and Marriages." The resolution ruled that "members of the Society will discourage the sale of patent or secret nostrums on the part of Druggists and Apothecaries throughout the State, and will patronize insofar as practicable, only those who abstain from the sale of such patent or secret nostrums."

The first full time secretary of the Society was Dr. Harold M. Camp who served for over 35 years until his death in 1958. The first executive administrator, Robert L. Richards, was employed at the time the office was moved to Chicago in 1960.

The Society published the early transactions in book form presenting not only the minutes of the House of Delegates, but also all scientific papers given at each annual convention. In 1898 a new

era of communications began, for at that time, the *Illinois Medical Journal* was established and became the first "official organ of the Society."

Dr. G. N. Kreider was its first editor and served until 1913, followed by Dr. Clyde D. Pence with Dr. Henry G. Olds as the first managing editor. Dr. Charles G. Whalen became editor in 1919 and he and Dr. Olds served until they died in 1940. Dr. Camp followed Dr. Whalen and Dr. Theodore R. Van Dellen is the editor today.

Dr. Whalen spearheaded many important activities in medicine, and has been called "the outstanding champion of the medical profession in its economic contacts." He has been credited as one of the first medical editors to blast "the socialization of medicine in this country." In 1922 he wrote extensively on state medicine, workmen's compensation, compulsory health insurance, free hospitalization and federal aid.

The first Fifty Year Club in the United States was announced by the *Illinois Medical Journal* in 1938.

The fourth largest medical society in the country has developed from these embryonic beginnings. This edition of the *Illinois Medical Journal* offers you an opportunity to contrast the extensive services available to the membership today with those offered in the past.

LIST OF OFFICERS AND PLACES OF MEETING SINCE ORGANIZATION OF THE SOCIETY

YEAR	PRESIDENT	SECRETARY	TREASURER	MEETING PLACE
1840	John Todd	David Prince		Springfield
1850	Rudolph Rouse	Edwin G. Meek		Springfield
1850	William B. Herrick	Edwin G. Meek	Jno. Halderman	Springfield
1851	Samuel Thompson	H. Shoemaker	R. Rouse	Peoria
1852	Rudolph Rouse	E. S. Cooper	Edw. Dickenson	Jacksonville
1853	Daniel Brainerd	H. A. Johnson	A. B. Chambers	Chicago
1854	C. N. Andrews	H. A. Johnson	N. S. Davis	LaSalle
1855	N. S. Davis	E. Andrews	J. V. Z. Blaney	Bloomington
1856	H. Noble	N. S. Davis	J. V. Z. Blaney	Vandalia
1857	C. Goodbreak	H. A. Johnson	J. V. Z. Blaney	Chicago
1858	H. A. Johnson	N. S. Davis	J. W. Freer	Rockford
1859	David Prince	N. S. Davis	J. W. Freer	Decatur
1860	Wm. M. Chambers	N. S. Davis	J. W. Freer	Paris
1863	A. McFarland	N. S. Davis	J. H. Hollister	Jacksonville
1864	A. H. Luce	N. S. Davis	J. H. Hollister	Chicago
1865	J. M. Steele	N. S. Davis	J. H. Hollister	Bloomington
1866	F. F. Haller	N. S. Davis	J. H. Hollister	Decatur
1867	H. Noble	N. S. Davis	J. H. Hollister	Springfield
1868	S. T. Trowbridge	N. S. Davis	J. H. Hollister	Quincy
1869	S. T. Trowbridge	T. D. Fitch	J. H. Hollister	Chicago
1870	J. V. Z. Blaney	T. D. Fitch	J. H. Hollister	Dixon
1871	G. W. Albin	T. D. Fitch	J. H. Hollister	Peoria
1872	J. O. Hamilton	T. D. Fitch	J. H. Hollister	Rock Island
1873	D. W. Young	T. D. Fitch	J. H. Hollister	Bloomington
1874	T. F. Worrell	T. D. Fitch	J. H. Hollister	Chicago
1875	J. H. Hollister	T. D. Fitch	Wm. E. Quine	Jacksonville
1876	T. D. Washburn	N. S. Davis	J. H. Hollister	Urbana
1877	T. D. Fitch	N. S. Davis	J. H. Hollister	Chicago
1878	J. L. White	N. S. Davis	J. H. Hollister	Springfield
1879	E. P. Cook	N. S. Davis	J. H. Hollister	Lincoln
1880	Ephraim Ingalls	N. S. Davis	J. H. Hollister	Belleville
1881	G. W. Jones	S. J. Jones	J. H. Hollister	Chicago
1882	Robert Boal	S. J. Jones	J. H. Hollister	Quincy
1883	A. T. Darrah	S. J. Jones	J. H. Hollister	Peoria
1884	E. Andrews	S. J. Jones	Walter Hay	Chicago
1885	D. S. Booth	S. J. Jones	Walter Hay	Springfield
1886	Wm. A. Byrd	S. J. Jones	Walter Hay	Bloomington
1887	Wm. T. Kirk	D. W. Graham	Walter Hay	Chicago
1888	Wm. O. Ensign	D. W. Graham	Walter Hay	Rock Island
1889	C. W. Earle	D. W. Graham	T. W. McIlvaine	Jacksonville
1890	John Wright	D. W. Graham	T. W. McIlvaine	Chicago
1891	Jno. P. Mathews	D. W. Graham	Geo. N. Kreider	Springfield
1892	Charles C. Hunt	D. W. Graham	Geo. N. Kreider	Vandalia
1893	E. Fletcher Ingals	D. W. Graham	Geo. N. Kreider	Chicago
1894	Otho B. Will	J. B. Hamilton	Geo. N. Kreider	Decatur
1895	Daniel R. Brower	J. B. Hamilton	Geo. N. Kreider	Springfield
1896	D. W. Graham	J. B. Hamilton	Geo. N. Kreider	Ottawa
1897	A. C. Corr	J. B. Hamilton	Geo. N. Kreider	East St. Louis
1898	J. N. G. Carter	E. W. Weis	Geo. N. Kreider	Galesburg
1899	J. T. Pitner	E. W. Weis	Geo. N. Kreider	Cairo
1900	H. N. Moyer	E. W. Weis	Geo. N. Kreider	Springfield
1901	G. N. Kreider	E. W. Weis	E. J. Brown	Peoria
1902	J. T. McAnally	E. W. Weis	E. J. Brown	Quincy
1903	M. L. Harris	E. W. Weis	E. J. Brown	Chicago
1904	C. E. Black	E. W. Weis	E. J. Brown	Bloomington
1905	W. E. Quine	E. W. Weis	E. J. Brown	Rock Island
1906	H. C. Mitchell	E. W. Weis	E. J. Brown	Springfield
1907	J. F. Percy	E. W. Weis	E. J. Brown	Rockford
1908	W. L. Baum	E. W. Weis	E. J. Brown	Peoria
1909	J. W. Pettit	E. W. Weis	E. J. Brown	Quincy

YEAR	PRESIDENT	SECRETARY	TREASURER	MEETING PLACE
1910	J. L. Wiggins	E. W. Weis	E. J. Brown	Danville
1911	A. C. Cotton	E. W. Weis	E. J. Brown	Aurora
1912	W. K. Newcomb	E. W. Weis	E. J. Brown	Springfield
1913	L. H. A. Nickerson	E. W. Weis	A. J. Markley	Peoria
1914	Charles J. Whalen	W. H. Gilmore	A. J. Markley	Decatur
1915	A. L. Brittin	W. H. Gilmore	A. J. Markley	Springfield
1916	C. W. Lillie	W. H. Gilmore	A. J. Markley	Champaign
1917	W. L. Noble	W. H. Gilmore	A. J. Markley	Bloomington
1918	E. B. Coolley	W. H. Gilmore	A. J. Markley	Springfield
1919	E. W. Fiegenbaum	W. H. Gilmore	A. J. Markley	Peoria
1920	J. W. Van Derslice	W. H. Gilmore	A. J. Markley	Rockford
1921	W. F. Grinstead	W. H. Gilmore	A. J. Markley	Springfield
1922	Charles Humiston	W. H. Gilmore	A. J. Markley	Chicago
1923	E. P. Sloan	W. D. Chapman	A. J. Markley	Decatur
1924	E. H. Oelsner	W. D. Chapman	A. J. Markley	Springfield
1925	L. C. Taylor	H. M. Camp	A. J. Markley	Quincy
1926	J. C. Krafft	H. M. Camp	A. J. Markley	Champaign
1927	Mather Pfeifferberger	H. M. Camp	A. J. Markley	Moline
1928	G. Henry Mundt	H. M. Camp	A. J. Markley	Chicago
1929	J. E. Tuite	H. M. Camp	A. J. Markley	Peoria
1930	F. O. Fredrickson	H. M. Camp	A. J. Markley	Joliet
1931	Wm. D. Chapman	H. M. Camp	A. J. Markley	East St. Louis
1932	R. R. Ferguson	H. M. Camp	A. J. Markley	Springfield
1933	John R. Neal	H. M. Camp	A. J. Markley	Peoria
1934	Philip H. Kreuscher	H. M. Camp	A. J. Markley	Springfield
1935	Charles D. Center*			
(Past President-Elect)				
1935	Charles S. Skaggs	H. M. Camp	A. J. Markley	Rockford
1936	Chas. B. Reed	H. M. Camp	A. J. Markley	Springfield
1937	Rolland L. Green	H. M. Camp	A. J. Markley	Peoria
1938	R. K. Packard	H. M. Camp	A. J. Markley	Springfield
1939	S. E. Munson	H. M. Camp	A. J. Markley	Rockford
1940	Jas. H. Hutton	H. M. Camp	A. J. Markley	Peoria
1941	J. S. Templeton	H. M. Camp	A. J. Markley	Chicago
1942	Chas. H. Phifer	H. M. Camp	H. M. Camp	Springfield
1943	E. H. Weld	H. M. Camp	H. M. Camp	Chicago
1944	G. W. Post**	H. M. Camp	H. M. Camp	Chicago
1945	E. P. Coleman***	H. M. Camp	H. M. Camp	
1946	E. P. Coleman	H. M. Camp	H. M. Camp	Chicago
1947	R. S. Berghoff	H. M. Camp	H. M. Camp	Chicago
1948	I. H. Neece	H. M. Camp	H. M. Camp	Chicago
1949	Percy E. Hopkins	H. M. Camp	H. M. Camp	Chicago
1950	Walter Stevenson	H. M. Camp	H. M. Camp	Springfield
1951	Harry M. Hedge	H. M. Camp	H. M. Camp	Chicago
1952	C. Paul White	H. M. Camp	H. M. Camp	Chicago
1953	Leo P. A. Sweeney	H. M. Camp	H. M. Camp	Chicago
1954	Willis I. Lewis	H. M. Camp	H. M. Camp	Chicago
1955	Arkell M. Vaughn	H. M. Camp	H. M. Camp	Chicago
1956	F. Garm Norbury	H. M. Camp	H. M. Camp	Chicago
1957	F. Lee Stone	H. M. Camp	H. M. Camp	Chicago
1958	Lester S. Reavley	H. M. Camp	H. M. Camp	Chicago
1959	Raleigh C. Oldfield	H. M. Camp	H. M. Camp	Chicago
1960	Joseph T. O'Neill	George F. Lull	George F. Lull	Chicago
1961	H. Close Hesselstine	Jacob E. Reisch	Jacob E. Reisch	Chicago
1962	Edwin S. Hamilton	Jacob E. Reisch	Jacob E. Reisch	Chicago
1963	George F. Lull	Jacob E. Reisch	Jacob E. Reisch	Chicago
1964	Harlan English	Jacob E. Reisch	Jacob E. Reisch	Chicago
1965	Edward A. Piszezsek	Jacob E. Reisch	Jacob E. Reisch	Chicago
1966	Burtis E. Montgomery	Jacob E. Reisch	Jacob E. Reisch	Chicago
1967	Caesar Portes	Jacob E. Reisch	Jacob E. Reisch	Chicago

*Died before induction into office

**Died in office. Term completed by Robert S. Berghoff, First Vice President

***Meeting cancelled 1945

PRINCIPLES OF MEDICAL ETHICS

PREAMBLE: These principles are intended to aid physicians individually and collectively in maintaining a high level of ethical conduct. They are not laws but standards by which a physician may determine the propriety of his conduct in his relationship with patients, with colleagues, with members of allied professions, and with the public.

SECTION 1—The principal objective of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full measure of service and devotion.

SECTION 2—Physicians should strive continually to improve medical knowledge and skill, and should make available to their patients and colleagues the benefits of their professional attainments.

SECTION 3—A physician should practice a method of healing founded on a scientific basis; and he should not voluntarily associate professionally with anyone who violates this principle.

SECTION 4—The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

SECTION 5—A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him; and unless he has been discharged he may discontinue his services only after giving adequate notice. He should not solicit patients.

SECTION 6—A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care.

SECTION 7—In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him, or under his supervision, to his patients. His fee should be commensurate with the services rendered and the patient's ability to pay. He should neither pay nor receive a commission for referral of patients. Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient.

SECTION 8—A physician should seek consultation upon request; in doubtful or difficult cases; or whenever it appears that the quality of medical service may be enhanced thereby.

SECTION 9—A physician may not reveal the confidences entrusted to him in the course of medical attendance, or the deficiencies he may observe in the character of patients, unless he is required to do so by law or unless it becomes necessary in order to protect the welfare of the individual or of the community.

SECTION 10—The honored ideals of the medical profession imply that the responsibilities of the physician extend not only to the individual, but also to society where these responsibilities deserve his interest and participation in activities which have the purpose of improving both the health and the well-being of the individual and the community.

The map displays the following congressional districts in Illinois:

- 1st District:** Located in the north-central part of the state, including counties like Stephenson, Winnebago, Boone, McHenry, and Lake.
- 2nd District:** Located in the north-central part, including counties like Carroll, Ogle, DeKalb, Kane, Cook, DuPage, Will, Grundy, and Kane.
- 3rd District:** Located in the north-eastern part of the state, including counties like Cook, DuPage, Will, Grundy, and Kane.
- 4th District:** Located in the west-central part of the state, including counties like Scott, Henry, Bureau, LaSalle, Kendall, and Will.
- 5th District:** Located in the central part of the state, including counties like Stark, Putnam, Marshall, Livingston, Woodford, Peoria, Tazewell, McLean, and Ford.
- 6th District:** Located in the west-central part of the state, including counties like Hancock, Macon, Schuyler, Logan, DeWitt, and Piatt.
- 7th District:** Located in the central part of the state, including counties like Christian, Shelby, Moultrie, Coles, and Clark.
- 8th District:** Located in the east-central part of the state, including counties like Champaign, Vermilion, Warren, Vermillion, Edgar, Douglas, and Clark.
- 9th District:** Located in the south-central part of the state, including counties like Fayette, Effingham, Jasper, Crawford, Clay, Marion, Wayne, Edwards, Wabash, Gibson, Hamilton, White, Posey, Saline, Gallatin, Union, Johnson, Pope, Hardin, Crittenden, Livingston, Massac, Pulaski, Ballou, Mc Cracken, and Scott.
- 10th District:** Located in the south-western part of the state, including counties like Madison, Bond, Montgomery, Sangamon, Morgan, Cass, Brown, Scott, Oregone, Macoupin, Jersey, Lincoln, Calhoun, Pike, Ralls, Marion, Adams, Lewis, Clark, and Hancock.

Neighboring states are labeled: IOWA to the west, INDIANA to the east, and KENTUCKY to the south. Major cities like CHICAGO, SPRINGFIELD, and PEORIA are also indicated.

CONSTITUTION AND BYLAWS

MAY 1966

Adopted, 1903
As Amended 1966

Constitution

ARTICLE I. NAME

The name and title of this organization shall be the Illinois State Medical Society.

ARTICLE II. PURPOSES OF THE SOCIETY

The purposes of this Society are to promote the science and art of medicine, to protect the public health, to elevate the standards of medical education and to unite the medical profession behind these purposes; to promote similar interests in the component societies and to unite with similar organizations in other states and territories of the United States to form the American Medical Association. The Society shall inform the public and the profession concerning the advancements in medical science and the advantages of proper medical care.

ARTICLE III. COMPONENT SOCIETIES

Component societies shall consist of those county medical societies which hold charters from this Society.

ARTICLE IV. COMPOSITION OF THE SOCIETY

The Society shall consist of active members and such other members as the Bylaws may provide.

ARTICLE V. HOUSE OF DELEGATES

Section 1. The House of Delegates shall be the legislative body of the Illinois State Medical Society, and unless otherwise herein provided, its deliberations shall be binding upon the officers, including the Board of Trustees. The House of Delegates shall set the basic policy and philosophy of the Society.

Section 2. The House of Delegates shall elect the general officers, except as otherwise provided in the Bylaws.

ARTICLE VI. BOARD OF TRUSTEES

The Board of Trustees, whose duties are executive and judicial, shall have charge of all property and all financial affairs of the Society, and shall perform such other duties as are prescribed by law governing the directors of corporations, or as may be prescribed in the Bylaws.

ARTICLE VII. CONVENTIONS AND MEETINGS

The Society shall hold an annual convention during which there shall be a business meeting of the House of Delegates and general scientific meetings which shall be open to all registered members.

ARTICLE VIII. OFFICERS

The officers of this Society shall be a president, a president-elect, a first vice president, a second vice president, a secretary-treasurer, a speaker and vice speaker of the House of Delegates, sixteen trustees and one trustee at large, and such other officers as the Bylaws may provide.

ARTICLE IX. THE SEAL

This Society shall have a common seal with power to break, change or renew the same when necessary.

ARTICLE X. AMENDMENTS

The House of Delegates may amend this Constitution at any annual business meeting of the House of Delegates provided that the amendment shall have been proposed at the preceding annual business meeting, and that two-thirds of the members of the House of Delegates seated concur in the amendment.

Bylaws

CHAPTER I. MEMBERSHIP

Section 1. *Members.*

A. *Active Members.* The active members of this Society shall consist of regular members, emeritus members, retired members, provisional members, intern members and residency members. Active members shall enjoy full privileges which include membership in the American Medical Association.

B. *Special Members.* The special members of this Society shall be distinguished because of their contributions to the science and art of medicine.

(1) *Distinguished Members.* Distinguished members shall be:

a. Physicians of Illinois or other states, or foreign countries who have risen to prominence in the profession; or

- b. Teachers of medicine or of the sciences allied to medicine, not eligible for active membership; or
- c. Members of associated arts or sciences who have made significant contributions to medicine.

(2) *Election.* Special members may be nominated by any member of the House of Delegates, and may be elected by the House at any annual convention by a two-thirds vote.

(3) *Privileges.* Special members shall not be entitled to hold office nor to vote, and shall not be considered as members in determining the number of delegates to the American Medical Association, but they may participate in all other Society activities.

Section 2. *Qualifications for Membership.*

A. Every physician duly licensed and registered in the State of Illinois to practice medicine in all its branches who is a graduate of a medical school approved in United States or Canada, a resident of the State of Illinois, a citizen of the United States, who is of good moral character and professional standing, and a member of his component medical society, shall be eligible for regular membership.

B. Provisional membership shall be available to any Illinois physician who has made a declaration of intention to become a citizen of the United States, who has received a license in this State to practice medicine in all of its branches, and who—with the exception of United States citizenship—possesses all of the qualifications for membership prescribed by these Bylaws. Provisional membership shall terminate one year after the expiration of the minimum period of time within which such member could have perfected his citizenship. After obtaining full citizenship and prior to the expiration of his provisional membership, such member may be, upon application to his component medical society, transferred to regular membership.

C. The following shall also be eligible if approved and recommended by the component medical society:

- (1) Every physician serving as a full time employee at the headquarters of the American Medical Association;
- (2) Physicians serving as medical officers in the United States Governmental Services, who are members of a component society, so long as they are engaged actively in their respective service, and thereafter, if they have been retired on account of age or physical disability, or after long and honorable

service under the provision of an Act of Congress;

D. Physicians otherwise eligible for membership, and licensed in one of the States of the Union, but not licensed in Illinois, and who are not engaged in the active practice of medicine, but otherwise employed in an allied medical activity which does not require licensure, shall be eligible for membership if approved and recommended by the component medical society and approved by the Board of Trustees.

Section 3. *Emeritus Members.* A member who has been in good standing for thirty-five years and who has reached the age of seventy, may upon application to and upon recommendation of his component society, be made an emeritus member and have all the rights and privileges of membership without the payment of dues to the component or state society.

Credit for membership in other American Medical Association constituent societies shall be accorded transferees, provided they have been members of this Society for at least five years.

Section 4. *Retired Members.* A member who has been in good standing but who by reason of age or incapacity, has retired from active practice, may upon application to and upon recommendation of his component society, be made a retired member, without payment of dues to the component or state society.

Section 5. *Intern Members.* Any person who is a graduate of a medical school approved in the United States or Canada, who is of good moral character and professional standing and who is serving an internship in any hospital in the State of Illinois approved by the American Medical Association, is eligible for intern membership upon the recommendation of any two members of this Society who are also members of his hospital staff.

The physician's intern membership shall cease at the end of the year in which his internship training terminates, and if he wishes to become a member of this Society, he must apply for a residency or regular membership through his component society.

Dues for intern membership shall be minimal.

Section 6. *Residency Members.* After being licensed to practice medicine, a physician serving full time as a resident in a residency approved by the American Medical Association, is eligible for full membership.

Dues for residency members shall be minimal.

A residency member must be a graduate of a medical school approved in the United States or Canada, have a degree of Doctor of Medicine or its equivalent, and must be a member in good standing of his component society.

The physician's residency membership shall cease at the end of the year in which his residency

training terminates, and if he wishes to become a member of this Society, he must apply for regular membership through his component society.

Section 7. *Tenure of Membership.* The name of a physician on the properly certified roster of members of a component society which has paid its annual assessments, shall be prima facie evidence of membership in this Society, and afford all the rights and privileges pertaining thereto.

Section 8. *Withdrawal of Privileges.* No person who is under sentence of suspension or expulsion from a component society, shall be entitled to any of the rights or benefits of this Society, nor shall he be permitted to take part in any of the proceedings until he has been reinstated.

CHAPTER II. ANNUAL CONVENTIONS

Section 1. *Date.* The Board of Trustees shall determine the date for the annual convention.

Section 2. *Meeting Place.* The meeting place for the annual convention shall be determined by the House of Delegates from a list of cities extending invitations, subject to investigation of the facilities and approval by the Board of Trustees.

Section 3. *Scientific Meetings.*

- A. With the consent of the House of Delegates or the Board of Trustees any special group may conduct its meeting in connection with the annual convention of this Society.
- B. For the transaction of scientific business, there shall be one or more sections as may be determined from year to year by the Board of Trustees.
- C. Section officers shall be appointed by the president of the Society from nominees recommended by the section, or if there are no nominees, from a list submitted by the chairman of the Committee on Scientific Assembly.
- D. The officers of the sections shall arrange the scientific program for the section in cooperation with the Committee on Scientific Assembly.
- E. All registered members may attend and participate in the proceedings and discussions of the general scientific meetings and of the section meetings.
- F. The general scientific meetings may recommend to the House of Delegates the appointment of committees or commissions for scientific investigation of special interest and importance to the profession and to the public.
- G. All papers read before the Society or any section thereof, shall become the property of the Society. Each paper shall be deposited with the secretary when read, and presentation of a paper to the Illinois State Medical Society shall be considered tantamount to the assurance on the part of the writer that such paper has not already been published.

H. The Board of Trustees shall be entirely responsible for the annual convention.

CHAPTER III. THE HOUSE OF DELEGATES

Section 1. *Composition.* The House of Delegates shall consist of (1) delegates elected by the component societies; (2) the officers of the Society; (3) the past presidents; (4) both general officers and members of the House of Delegates of the American Medical Association from the Illinois State Medical Society. Past trustees and past speakers shall be members of the House of Delegates without the right to vote.

Section 2. *Meetings.* The House of Delegates shall meet at the time and place of the annual convention of the Society, and shall fix its hours of meeting so that they shall not conflict with the general scientific meetings of the Society. If the interests of the Society and the profession require, the House of Delegates may meet in advance of the general scientific meetings.

Section 3. *Quorum.* Fifty delegates representing not less than twenty component societies shall constitute a quorum for the transaction of business.

Section 4. *Special Meetings.* Special meetings of the House of Delegates may be called by the president or a majority of the Board of Trustees, or shall be called on petition of twenty component societies.

When a special meeting is thus called, the secretary shall mail a notice to the last known address of each member of the House of Delegates at least ten days before the special meeting is to be held. The notice shall specify the time and place of the meeting and the purpose for which the meeting is called. The meeting shall not consider any business except that for which it was called.

Section 5. *Delegates.* Each component society shall be entitled to send to the House of Delegates each year, one delegate for each 75 members, and one for a major fraction thereof; but each component society which has made its annual report and paid its assessment as provided for in this Constitution and Bylaws, shall be entitled to one delegate.

The number of delegates to which any component society is entitled shall be determined by the number of active members of the component society on the membership rolls of the Illinois State Medical Society as of December 31 of the preceding year.

The term of office of a delegate shall begin January 1 following his election, and shall be for two years, or until his successor has been elected. Component societies with one delegate only, may elect for one year.

Section 6. *Registration.* Before being seated at any annual or special session, each delegate or his alternate shall deposit with the Reference Committee on Credentials a certificate signed by the

president and/or the secretary of the component society, stating that the delegate or alternate has been regularly elected to the House of Delegates.

A delegate or his alternate may be seated without credentials, provided he is properly identified by his county society and so certified to the secretary of the Illinois State Medical Society.

When a delegate and his alternate are unable to attend a specified meeting, the appropriate authorities of the component society concerned may appoint a substitute delegate and a substitute alternate who on presenting proper credentials, shall be eligible to regular membership in the House of Delegates.

A delegate whose credentials have been accepted by the Reference Committee on Credentials and whose name has been placed on the roll of the House, shall remain a delegate until final adjournment of that meeting. If a delegate, once seated, is unable to be present for reasons acceptable to the Committee on Credentials, an alternate may be certified by that Committee. After the alternate has been seated, he cannot be replaced.

Section 7. *AMA Delegates and Alternate Delegates.* The House of Delegates shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and Bylaws of that body.

Section 8. *District Divisions.* The House of Delegates shall divide the state into districts, specifying which counties each district shall include.

Section 9. *Committees.* The House of Delegates shall have authority to designate to serve on ad hoc committees, members of the Society who are not members of the House and who may be present to participate in the debate on their reports.

Section 10. *Memorials and Resolutions.* It shall approve all memorials and resolutions issued in the name of the Society before they shall become effective.

CHAPTER IV. ELECTION OF OFFICERS

Section 1. *Officers.* The officers of this Society shall consist of the president, president-elect, first and second vice presidents, secretary-treasurer, speaker and vice speaker, sixteen trustees and one trustee-at-large.

Section 2. *Elections.* All elections shall be by ballot except when there is only one candidate for a given office, then election may be by voice vote.

The majority of votes cast shall be necessary to elect.

The election of officers, members of standing committees, delegates and alternate delegates to the American Medical Association, shall be the first order of business at the last session of the House of Delegates. Officers of the Society shall assume office at the adjournment of the annual business meeting.

Section 3. *Terms of Office.* The president-elect, vice presidents, secretary-treasurer, the speaker and vice speaker shall be elected annually by the House of Delegates to serve for a term of one year.

Members of the Board of Trustees shall be elected by the House of Delegates to serve for a term of three years.

The speaker and vice speaker shall not be elected for more than three consecutive terms to their respective offices; they shall be elected from the membership of the House of Delegates.

The president-elect shall be inducted into the office of president by the retiring president during the final session of the House of Delegates. After assuming office at the adjournment of the annual business meeting, he shall continue in office until his successor has been elected and installed. Following his retirement as president, he shall automatically become a trustee-at-large for a term of one year.

CHAPTER V. DUTIES OF OFFICERS

Section 1. *The President.* The president of the Illinois State Medical Society shall lead the Society in all its functions. He shall deliver an annual address at such time as may be arranged, and perform such other duties as custom and parliamentary usage may require.

The president shall appoint the ad hoc committees of the House of Delegates. He may seek the advice of the officers and trustees.

He shall preside at the general scientific meetings of the Society or designate one of the vice presidents to substitute for him.

Section 2. *The Vice Presidents.* The vice presidents shall act for and perform such duties for the president as he shall direct. They shall, when so acting, implement and advance the programs and policies of the president.

In the event of the president's death, resignation or removal from office, the first vice president shall succeed to the presidency.

In the event of a vacancy in the office of first vice president, the president shall fill the office by appointment.

Section 3. *Successor to President-Elect.* In the case of death, resignation, or removal from office of the president-elect, the office shall be filled by the House of Delegates at the next annual convention by election at a time recommended by the Reference Committee on Rules and Order of Business.

Section 4. *The Speaker.* The speaker, who shall be versed in parliamentary procedure, shall preside at the meetings of the House of Delegates and shall perform such duties as custom and parliamentary usage require.

He shall appoint the reference committees.

He shall be an ex-officio member of the Committee on Constitution and Bylaws.

Section 5. *The Vice Speaker.* The vice speaker shall preside for the speaker in the latter's absence or at his request. In case of death, resignation or inability of the speaker to perform his duties, the vice-speaker shall serve during the unexpired term.

Section 6. *The Secretary-Treasurer.* In addition to the rights and duties ordinarily devolving on the secretary of a corporation by law, custom or parliamentary usage, and those granted or imposed in other provisions of the Constitution and these Bylaws, the secretary-treasurer shall be the official custodian of all securities and the income therefrom, owned by the Society, subject to the direction and disposition of the Board of Trustees. He shall be a member of the Finance Committee of the Board of Trustees.

The Board of Trustees may select a bank or trust company to act as custodian in the place of the secretary-treasurer, of all or any part of such securities and to act as agent of the Society in collecting the income therefrom.

The secretary-treasurer shall give bond in such sum as may be fixed by the Board of Trustees, the premium on such bond to be paid by the Society. He shall perform such other duties as may be directed by the House of Delegates or by the Board of Trustees.

In the event of a vacancy in the office of the secretary-treasurer, the Board of Trustees shall fill the vacancy until the next annual election.

CHAPTER VI. THE BOARD OF TRUSTEES

Section 1. *Composition.* The Board of Trustees shall consist of sixteen trustees elected by the House of Delegates [six shall be chosen from district number three, and one from each of the other ten districts (see map attached), these districts of the geographical area as of May, 1946], and one trustee-at-large (the retiring president, who shall serve a term of one year), the president, the president-elect, the speaker and secretary-treasurer.

The vice presidents and vice speakers shall attend the meetings (including executive sessions), with the right of discussion, but without the right to vote.

Section 2. The duties of the Board of Trustees are executive, custodial and judicial.

A. *Executive Duties.* The Board of Trustees shall implement all mandates from the House of Delegates except in matters of property or finance when it shall have sole authority.

The Board of Trustees may request a report from any committee in the interim between meetings of the House of Delegates.

B. *Custodial Duties.* The Board of Trustees shall have charge and control of all property of whatsoever nature belonging to the Society,

and of all funds from whatsoever source belonging to the Society.

No person shall expend or use for any purpose money belonging to the Society without the approval of the Board of Trustees.

All money received by the Board of Trustees and its agents, resulting from the duties assigned them, shall be paid into the treasury of the Society, and all orders on the treasury for disbursements of money shall be approved by the Board.

The Board of Trustees shall formulate rules governing the expenditure of money to meet the necessary running expenses and fixed charges of the Society.

All acts of the House of Delegates involving the expenditure, appropriation or use in any manner of money, or the acquisition or disposal in any manner of property of any kind belonging to the Society, must be approved by the Board of Trustees before same shall become effective.

Funds may be appropriated to encourage scientific investigation, medical education or any other purpose deemed proper and approved by the Board of Trustees.

C. *Judicial Duties.* The Board of Trustees shall be the board of censors of the Society. It shall have jurisdiction over all questions of ethics and in the interpretation of the laws of the Society. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to component societies, or to this Society.

All questions of an ethical nature before the House of Delegates or the general scientific meetings, shall be referred to the Board of Trustees without discussion. The Board shall hear and decide all questions of procedure affecting the conduct of members on which an appeal is taken from the decision of a component society.

The decision of the Board of Trustees shall be final except that an appeal may be taken by a member charged with misconduct as provided for in the Constitution and Bylaws of the American Medical Association.

Section 3. *Executive Administrator.* The Board of Trustees shall employ an executive administrator whose duties shall be determined by the Board. He shall be responsible to the chairman of the Board. The Board shall review at each of its meetings the interim activities of the administrator. The Board shall also employ such other people as are needed for the conduct of the affairs of the Society.

Section 4. *Meetings.* The Board of Trustees shall meet daily during the annual convention of the Society, and at such other times as necessity may require, subject to the call of the chairman, or on the petition of the majority of the Trustees.

Section 5. *Organization.*

- A. *Chairman.* The Board of Trustees shall meet on the last day of the annual convention and elect from among its members a chairman. He shall hold office for one year and may succeed himself for one additional year.
- B. *Duties of the Chairman.* The chairman of the Board of Trustees shall prepare an agenda and shall preside at all meetings of the Board. He shall make an annual report to the House of Delegates. He shall be chairman of the Executive Committee. He shall present the report of the actions of the Executive Committee to the Board.
- C. *Committees.* The Board shall form the following committees within itself:
- (1) Executive Committee.
 - (2) Finance Committee.
 - (3) Policy Committee.
 - (4) Such other committees as are deemed necessary.
- D. *Duties of the Committees.*

- (1) *Executive Committee.* The Executive Committee shall consist of the president, the president-elect, the chairman of the Board, the chairman of the Finance Committee, the chairman of the Policy Committee, the secretary-treasurer and the trustee-at-large.

It may be given authority to act by the Board of Trustees.

In matters of routine administration, special plans, policy, endorsement or expenditure it shall report to and request approval of the Board. It shall receive the reports of the Finance and Policy Committees and make recommendations concerning them to the Board. It shall furnish a report of its actions to the Board at each meeting.

- (2) *Finance Committee.* The Finance Committee shall consist of the secretary-treasurer of the Society and three members of the Board appointed by the chairman. It shall develop for approval of the Board through the Executive Committee, a budget for the fiscal year. It shall supervise the financial transactions of the Society. It shall make recommendations to the Board for the control and investment of the funds of the Illinois State Medical Society.
- (3) *Policy Committee.* The Policy Committee shall consist of three members of the Board appointed by the chairman. It shall continually review past and current proceedings of the House of Delegates to determine the estab-

lished policies of the Illinois State Medical Society.

Section 6. *Quorum.* Ten members of the Board of Trustees shall constitute a quorum for the transaction of business.

Section 7. *County Societies.* The Board of Trustees shall have authority to organize the physicians of two or more counties into societies to be suitably designated, and these societies, when organized and chartered, shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately.

Section 8. *Publications.* The Board of Trustees shall provide and superintend the publication and the distribution of all proceedings, transactions and memoirs of the Society, and shall have authority to appoint an editor and such assistants as it deems necessary.

Section 9. *Bonding.* The Board of Trustees shall provide at the expense of the Society, adequate bond for those officers and employees of the Society it considers require bonding.

Section 10. *Duties of Trustees.* Each trustee shall be the organizer, consultant, advisor, administrator and speaker for the members of his district, and represent the Society as well as the members of his district at the Board meetings.

Each trustee should visit the societies in his district at least once a year. He shall make an annual report of his work and the condition of the profession in each society in his district to the Board of Trustees and to the House of Delegates.

Where his district is composed of more than one county, the trustee shall be an ex-officio member of the district Ethical Relations Committee, Grievance Committee, and Prepayment Plans and Organizations Committee. He shall report to the Board of Trustees the actions of the component societies on reports of these committees.

The necessary traveling expenses incurred by such trustee in the line of the duties herein imposed, may be allowed by the Board of Trustees upon presentation of a properly itemized statement.

Section 11. *Vacancies.* If during the interval between two annual conventions, sickness, death, or removal from the state or district, or any other reason prevents a trustee from attending the duties of his district, or if he shall be absent from two consecutive meetings of the Board, his office may be declared vacant at the discretion of the Board. The Board shall have the authority to fill the vacancy for the period between the date at which the office was declared vacant and the next annual meeting of the House of Delegates.

Section 12. *The Benevolence Fund.* Each year the Board shall appropriate from the funds of this Society such sum or sums as it may deem proper to be held in a fund to be known as "The Benevolence Fund." This fund is established and shall be

used only for the assistance or relief of needy members of this Society, their widows, widowers, or minor children. The assets shall be held in the treasury of this Society in a separate fund. Donations or bequests to the Benevolence Fund automatically become a part of these assets.

Section 13 Audit and Financial Statement. The Board of Trustees shall employ annually a certified public accountant to audit all accounts of the Society, and present a statement of same in its annual report to the House of Delegates.

This report shall also specify the character and cost of all publications of the Society during the year, and the amount of all other property belonging to the Society under its control, with such suggestions as it may deem necessary.

CHAPTER VII. DISTRICT COMMITTEES

Each trustee district which is composed of more than one county, shall have an Ethical Relations Committee, a Grievance Committee, a Committee on Prepayment Plans and Organizations, and such other committees as required to provide to each component society, those services the component society may not be able to provide for itself. District committees shall function only at the request of a component society within the district.

Reports of findings and recommendations of these district committees shall be made to the component society which requested action.

The district trustee shall include a summary of the activities of each of these committees and the findings in general, in his annual report to the House of Delegates.

The committee members shall be elected, subject to the general rules on composition of committees contained in Section 5, Chapter IX, of these Bylaws, at a meeting of the delegates of the district called by the trustee of the district, before or during the annual convention of the Illinois State Medical Society. Chairmen of the committees shall be designated by the trustee of the district, and the trustee shall be an ex-officio member of each committee.

CHAPTER VIII. DUES AND EXPENSES

Section 1. Annual Dues. Assessments may be levied by the House of Delegates on each component society on a proportional basis. The amount of the dues shall be fixed by the House of Delegates and shall include the dues and/or assessments approved by the House of Delegates of the American Medical Association.

These annual dues shall include the annual subscription to the Illinois Medical Journal which shall be at least fifty per cent of the regular subscription price of the Journal.

Section 2. The Board of Trustees upon recommendation of the component society, shall give 50% reduction in dues to teaching, research and

administrative personnel in full time employment in the approved medical schools in Illinois, or similar not-for-profit institutions in Illinois.

Section 3. Physicians in private practice of medicine may be given a 50% reduction in dues during the first year of practice upon recommendation of their component society.

Section 4. Physicians approved for membership after June 30 shall pay one-half of the annual dues for that year.

Section 5. The Board of Trustees may authorize the remission of dues of any member on recommendation of his component society for good reason. In such cases the secretary shall recommend remission of dues by the American Medical Association.

CHAPTER IX. COMMITTEES

Section 1. Committee Meetings. The chairman of a committee, when he considers it expedient and with the consent of two-thirds of the members of the committee, may conduct business or hold meetings by mail or by conference call, provided all members of the committee are given opportunity to participate, that minutes of the transactions are recorded, approved by the members participating, and circulated among all committee members.

Section 2. Standing Committees. The Standing Committees shall be:

A. Elected by the House of Delegates:

A Committee on Medical Education

A Grievance Committee

A Committee on Prepayment Plans and Organizations

A Committee on Disaster Medical Care

A Committee on Laboratory Evaluation

A Committee on Occupational Health

A Committee on Public Safety

B. Appointed by the Board of Trustees:

A Committee on Scientific Assembly

A Medical Legal Committee

A Committee on Impartial Medical Testimony

A Committee on Legislation

A Committee on Public Relations

A Committee on Medical Benevolence

A Committee on Archives

A Committee on Constitution and Bylaws

Section 3. Ad Hoc Committees. The president or the Board of Trustees, each independently or at the discretion of the House of Delegates, or the House of Delegates independently, may appoint to accomplish specific tasks, committees which shall continue until the purpose for which they were appointed is accomplished, or until discharged by the appointing authority.

Section 4. Other Committees. Such other committees as shall be required to further the purposes

for which the Illinois State Medical Society was founded, to implement directives and policies of the House of Delegates, or to act in liaison with other agencies, may be appointed by the president or the chairman of the Board of Trustees to serve for the duration of the term of office of the appointing authority.

Section 5. *Composition.*

- A. Committees shall consist of at least three and not more than nine members.
- B. Members of standing committees shall serve for a term of three years except that
 - (1) when a vacancy occurs for any reason, it shall be filled for the unexpired term only, and
 - (2) when a committee is originally constituted, terms of committee members shall be staggered so that approximately one-third of the terms shall expire each year.
- C. The chairmen of standing committees elected by the House of Delegates shall be appointed annually by the president from the committee members. The chairmen of standing committees from the Board of Trustees shall be appointed annually by the chairman of the Board from the committee members.
- D. No member may serve on any committee for more than three consecutive terms or nine consecutive years.

Section 6. *Organization.* The power is vested in the authority electing or appointing a committee

- A. to create, organize and implement that committee;
- B. to enlarge it, or
- C. to abolish it without consideration of the unexpired terms of any of its members.

Section 7. *Vacancies.* Vacancies occurring for any reason in the membership of any committee may be filled for the unexpired term by appointment by the chairman of the Board of Trustees with the approval of the Board.

Section 8. *Ex-officio Members.* The president of the Society, chairman of the Board of Trustees and the secretary-treasurer of the Society shall be ex-officio members without the right to vote, of all committees.

Section 9. *Reports.* Annual reports shall be submitted to the House of Delegates by all committees.

Any committee shall report to the Board of Trustees when requested by the Board to do so.

Section 10. *Committee on Medical Education.* The Committee on Medical Education shall consist of five members to be elected by the House of Delegates.

This committee shall

- A. maintain a continuing interest in the recruitment of students, in the curricula of the medical schools and in postgraduate in-hospital training programs;

- B. carry to the deans of the medical schools recommendations from the viewpoint of the practicing physician;
- C. encourage and implement the AMA-ERF program in Illinois;
- D. study, evaluate and criticize the postgraduate programs of the Illinois State Medical Society and other organizations, and
- E. be available to advise and cooperate with the Department of Registration and Education of the State of Illinois.

Section 11. *Grievance Committee.* The Grievance Committee shall consist of six members elected by the House of Delegates.

Each component society should elect or appoint a grievance committee. If a county does not have a grievance committee, the district grievance committee shall function in its stead. The county or district grievance committee shall investigate complaints, and resolve differences arising from the rendering of professional services by members of the Society to the public.

Where the county or district grievance committee finds that factors in any case warrant, it shall recommend to the county medical society that charges of unethical conduct be preferred against the offending member of the Society. Failure to appear on order of the committee may be interpreted as grounds for a citation of unprofessional conduct.

It shall be the function of the State Society Grievance Committee

- A. to cooperate with grievance committees of component societies and districts in an effort to resolve differences between members of the Society and the public;
- B. to review the actions and decisions of county and district grievance committees when a party to a grievance complaint appeals from the decision of the local committee. Appeal to this committee is the privilege of such parties and they shall be so notified at the time of the hearing of the original complaint, and
- C. to conduct a continuing study of the complaints against the medical profession of the State of Illinois and to make recommendations to improve the quality of medical care.

To accomplish these purposes, the State Grievance Committee shall require that county medical societies furnish an annual report of their grievance committee activities including specifically

- A. the number of complaints
- B. a classification of the complaints
- C. the date of each complaint, and
- D. the date and nature of its settlement.

The Grievance Committee shall tabulate and analyze this material in its annual report to the House of Delegates.

Section 12. *Committee on Prepayment Plans and Organizations.* The Committee on Prepayment Plans and Organization shall consist of five members elected by the House of Delegates.

It shall review and adjust differences between members of the Society and prepayment plans and/or insurance organizations (including federal and state governmental programs), except those otherwise served by special advisory committees. In disputes brought by third parties against physicians, the committee shall act only upon referral or appeal from county or district committees.

The committee shall encourage county medical societies to establish appropriate committees to which third party grievances may be brought and to notify third party plan administrators of the existence of such local committees.

The committee may

- A. recommend procedures for conducting hearings by county or district committees, and
- B. develop guides consistent with the policy of the House of Delegates for county medical societies in their dealings with third party plans which pay "usual and customary fees."

In any dispute over fees between a physician and any third party plan involving a fee or benefit schedule negotiated by the Illinois State Medical Society, the committee may act in review at the member's request without referral from the county or district committee.

The committee shall consider

- A. all problems bearing on the relationship between physicians and prepayment plans or health insurance carriers;
- B. methods for increasing the effectiveness of existing prepayment and insurance plans;
- C. proposals for the financing of medical care for all segments of the population, and
- D. problems encountered by physicians in supplying services under the various certificates and policies, or in the reporting of claims.

After being notified of the decision of the committee, a member of the Society shall have 30 days to appeal for a rehearing before the committee. If after careful investigation, the Committee on Prepayment Plans and Organizations finds that the complaint cannot be adjudicated amicably, the committee shall report the matter to the county society. If factors in the case warrant it, the committee may recommend that charges of unethical conduct be preferred against the offending member or that agreements with plans and organizations be re-evaluated.

Failure to appear on order of the committee may be grounds for citation of unprofessional conduct to the county society.

Section 13. *Committee on Disaster Medical Care.* The Committee on Disaster Medical Care shall consist of five members elected by the House of Delegates.

The committee shall:

- A. be responsible for assisting in the education of the profession and the public on the development and implementation of programs to provide medical care in the event of disaster;
- B. be responsible for directing the Society's efforts toward preparedness in the event of natural or man-made catastrophes;
- C. cooperate with civil defense agencies, public health departments, hospitals, management and labor organizations, paramedical groups and other agencies to establish unity and coordination, and
- D. serve in an advisory capacity to county medical societies in medical self-help training programs and hospital disaster planning.

Section 14. *Committee on Laboratory Evaluation.* The Committee on Laboratory Evaluation shall consist of five members elected by the House of Delegates.

The committee shall:

- A. effect methods of elevating and maintaining the standards of medical laboratories in Illinois;
- B. encourage the use of medical diagnostic laboratories supervised by duly qualified physicians, and
- C. encourage each county and district to establish evaluation committees.

Section 15. *Committee on Occupational Health.* The Committee on Occupational Health shall consist of five members elected by the House of Delegates.

The committee shall:

- A. be concerned with diseases and problems associated with occupational and industrial health;
- B. co-operate with the Council on Occupational Health of the American Medical Association, Industrial Medical Association and similar state agencies, and
- C. recommend to the State of Illinois Workman's Compensation Board medical procedures designed to assist the Board in the evaluation of claims.

Section 16. *Committee on Public Safety.* The Committee on Public Safety shall consist of five members elected by the House of Delegates.

The committee shall:

- A. study the medical aspects of accident prevention;
- B. alert the public to seasonal health hazards, and
- C. co-operate with the Illinois Department of Public Health, the National Safety Council and similar organizations.

Section 17. *Committee on Scientific Assembly.* The Committee on Scientific Assembly shall consist of nine members appointed by the Board of Trustees.

This committee

- A. shall coordinate the programs for the general assemblies, the section meetings and the scientific exhibits at the annual convention;
- B. shall appoint, with the approval of the Board, a secret committee to make awards to the scientific exhibitors;
- C. may incorporate in the annual scientific meetings those meetings of medical specialty groups which wish to affiliate with the Illinois State Medical Society annual convention, and
- D. shall arrange for the annual banquet and other social functions held during the annual convention.

Section 18. *Medical Legal Committee.* The Medical Legal Committee shall consist of five members appointed by the Board of Trustees.

It shall

- A. educate the members of the medical profession in medico-legal affairs, and
- B. cooperate with the American Medical Association in its program in the same fields.

It shall evaluate medical testimony given by physicians in the courts of Illinois. When questions on the validity of testimony arise, it shall have the authority

- A. to examine any member of the Illinois State Medical Society who is either suspected of or has been accused of giving improper testimony in any court proceedings
- B. to procure and examine transcripts of court testimony to determine whether or not fraudulent testimony has been given, and
- C. to report its findings to the Board of Trustees.

Where irregularities are found, the Board of Trustees may submit the findings to the Ethical Relations Committee of the county medical society for action.

It shall appoint a sub-committee to act in liaison with members of a similar committee of the Illinois Bar Association in matters involving both professions.

Section 19. *Impartial Medical Testimony Committee.* The Impartial Medical Testimony Committee shall consist of nine members appointed by the Board of Trustees.

It shall cooperate with the judiciary in both federal and state courts within the State of Illinois.

It shall, when requested by the court, implement the Impartial Medical Testimony Rule.

Section 20. *Committee on Legislation.* The Committee on Legislation shall consist of five members appointed by the Board of Trustees.

The Committee on Legislation shall represent and direct legislative activities of the Illinois State Medical Society in accordance with policies of the House of Delegates and at the direction of the Board of Trustees.

Committees and representatives of the Society which may be concerned with legislation shall, be-

tween meetings of the House of Delegates, channel their recommendations to the Board of Trustees for referral to the Committee on Legislation.

This committee shall

- A. inform the membership through approved media of all legislative matters of interest to the medical profession in the State of Illinois;
- B. maintain surveillance of all bills introduced in the state legislature which have direct or indirect effect upon the practice of medicine or the state of health of the citizens of Illinois;
- C. maintain effective liaison with the American Medical Association Council on Legislative Activities and the American Medical Association Washington Office, so that members of the Illinois State Medical Society will be fully informed and can act vigorously on matters of federal legislation, and
- D. recommend to the Board of Trustees a legislative program for promulgation among the members of the Society.

A report of its activities shall be submitted currently to the Board of Trustees and annually to the House of Delegates.

Section 21. *Committee on Public Relations.* The Committee on Public Relations shall consist of five members appointed by the Board of Trustees.

It shall plan and execute programs designed to enhance the relationship between the public and the medical profession. It shall request the Board of Trustees to appoint sub-committees to accomplish specific purposes.

Section 22. *Committee on Medical Benevolence.* The Committee on Medical Benevolence shall consist of three members appointed by the Board of Trustees.

It shall

- A. examine applications to the Society for assistance to determine eligibility for benefits;
- B. keep the names of the beneficiaries confidential and known only to the committee, and
- C. recommend to the Finance Committee of the Board of Trustees the allotment for each recipient.

If funds available become inadequate to meet disbursement, the Finance Committee of the Board of Trustees shall be requested to appropriate sufficient funds to support the program until the next budget appropriation.

Section 23. *Committee on Archives.* The Committee on Archives shall consist of three members appointed by the Board of Trustees.

It shall

- A. assist in the collection and evaluation of medical items and records of historical interest to the Society and the public;
- B. cooperate with other associations and agencies to preserve and display such material;

- C. supervise the preparation of any written records of the Society or any of its activities, and
- D. inform the Board of Trustees of those special anniversaries which should be commemorated and shall supervise the observance of these occasions.

It shall appoint a sub-committee on the Museum of Medical History which shall

- A. be responsible for the establishment of a Museum of Medical Progress in the State of Illinois;
- B. cooperate with the historical museum of the State of Illinois and various other historical societies, and
- C. educate the public in the contributions made by physicians of Illinois to preventive medicine and the care and treatment of patients.

Section 24. *Constitution and Bylaws.* The Constitution and Bylaws Committee shall consist of five members appointed by the Board of Trustees.

It shall

- A. receive from individual members, county societies, committees, the Board of Trustees and the House of Delegates, all suggestions and proposals for the modification of the Constitution and/or Bylaws;
- B. prepare for the consideration of the House of Delegates all changes in the Constitution or Bylaws, and
- C. maintain constant surveillance of both documents to keep them current, effective and consistent with policies of the House of Delegates.

CHAPTER X. REFERENCE COMMITTEES

Section 1. *Appointment.* Immediately after the organization of the House of Delegates at each annual or special meeting, the speaker shall announce the appointment from among the members of the House, such committees as may be deemed expedient by the House of Delegates.

Each committee shall consist of five or more members unless otherwise provided, the chairman to be announced by the speaker. These committees shall serve during the meeting at which they are appointed.

Section 2. *Duties of Reference Committees.* References, resolutions, measures and propositions presented to the House of Delegates shall be referred to the appropriate committee, which shall report to the House of Delegates before final action shall be taken. A two-thirds affirmative vote of the House of Delegates shall be required to suspend this rule.

Section 3. *Organization.* Each reference committee shall, as soon as possible after the adjournment of each session, or during the session if necessary, take up and consider such business as may have

been referred to it, and shall report on same at the next session, or when called upon to do so.

Section 4. *Reference Committees.* The following committees are hereby provided for:

A Committee on Credentials

A Committee on Rules and Order of Business

Tellers and Sergeants-at-Arms

A Committee on Changes in the Constitution and Bylaws

and such other committees as the speaker shall deem necessary to consider the reports of officers, trustees, executive administrator, the reports of committees pertaining to administrative activities, economics activities, scientific activities, public relations activities and legislative activities, as well as such resolutions, reports, and proposals as shall be brought before the House of Delegates.

Section 5. *The Committee on Credentials* shall consider all questions regarding the registration and the credentials of the delegates. It shall pass out and receive the attendance slips for each session of the House of Delegates, and perform any other duties assigned.

Section 6. *Committee on Rules and Order of Business* shall consider all matters regarding rules governing action, method of procedure and order of business for the House of Delegates.

Section 7. *The Tellers and Sergeants-at-Arms* shall serve the speaker of the House of Delegates whenever the situation arises which requires a ballot vote or executive session of the House of Delegates.

Section 8. *The Committee on Changes in Constitution and Bylaws* shall consider all proposed amendments to the Constitution and Bylaws.

The chairman of the Committee on Constitution and Bylaws, or his representative, shall serve in an advisory capacity to this reference committee and shall attend all sessions, including the executive sessions of the reference committee, to assist in the preparation of the report of the committee of the House of Delegates.

CHAPTER XI. COUNTY SOCIETIES

Section 1. All county societies now in affiliation with this Society, or those which may hereafter be organized in this state, which have adopted principles of organization in harmony with this Constitution and Bylaws, shall upon application to and approval by the Board of Trustees, receive a charter from and thereby become a component part of this Society, and members thereof shall become members of this Society and the American Medical Association.

Section 2. Charters shall be issued only on approval of the Board, and shall be signed by the president and the secretary of this Society.

The Board shall have authority to revoke the charter of any component society whose actions

are in conflict with the letter and spirit of this Constitution and Bylaws.

Section 3. Only one component medical society shall be chartered in any county.

Section 4. Every registered physician holding the title of Doctor of Medicine or its equivalent, who either (1) resides in the jurisdiction of a component society, or (2) resides in a state other than Illinois but practices principally in the jurisdiction of a component society and who is of good moral character and professional standing, shall be eligible to membership in that component society.

The component county society shall be the sole judge of the qualifications of its members, subject only to the stipulations contained in the Constitution and Bylaws.

Section 5. Any physician who has been disciplined by any action of a component society and believes he has not had a fair trial, shall have the right of appeal to the Board of Trustees.

Section 6. When a member in good standing in a component society changes his residence to another county in this state, such change of residence shall terminate his membership in such component society. (This ruling shall not apply to members in military service or in the service of the State or the United States government.)

Such member shall be entitled, upon his request, to a statement from his former secretary as to his standing. This statement of standing shall be issued without cost to the applicant.

He shall present this statement to the component society of the county to which he removes and it shall accompany his application for membership. The board of censors of the society receiving this application shall give this statement of prior standing due consideration before accepting or rejecting his application for membership.

Section 7. A physician living on or near a county line, or practicing partly or totally in an adjacent county, may hold his membership in the county most convenient for him, provided he submits written authorization to that society from the component society in whose jurisdiction he resides.

Section 8. The secretary of each component society shall keep a roster of its members, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this state, and such other information as may be deemed necessary. In keeping such a roster the secretary shall note any changes in the personnel of the profession by death or by removal to or from the county. When requested, he shall furnish on blanks supplied him for the purpose, an official report containing such information for the secretary of this Society and likewise for the trustee of the district in which his county is situated.

Section 9. The secretary of each component society shall forward its roster of officers and members, and a list of delegates and alternate delegates to the secretary of this Society before the fifteenth of January each year.

Section 10. Any component society which fails to pay its assessment or make the annual report required on or before March fifteenth shall be held as suspended and none of its members shall be permitted to participate in any of the business or proceedings of the Society or of the House of Delegates until such requirements have been met.

A member is in good standing unless otherwise disqualified, whose dues are paid on or before the first day of March of the current year. Immediately after the first of March, each delinquent member shall be notified that in consequence of non-payment of dues, his membership is delinquent. If dues remain unpaid as of June thirtieth of the current year, membership shall be dropped automatically. The member may be reinstated by paying all delinquent dues, provided, in the interim, he has not been guilty of conduct prejudicial to membership; but if two or more years have elapsed since he was a member in good standing, he must in addition, make application as a new member.

Section 11. The Constitution and Bylaws of the Illinois State Medical Society and of the American Medical Association, together with the Principles of Medical Ethics of the American Medical Association, shall be binding upon the members of the component societies.

CHAPTER XII. DISCIPLINE

PART 1. COMPONENT SOCIETY PROCEDURE

Section 1. *Local Ethical Relations Committee.* Each component society may have, either by appointment or election, an Ethical Relations Committee, whose duty it shall be to prosecute formal charges of unethical conduct. In the event that the county society does not have such a committee, the district Ethical Relations Committee shall function in its behalf.

Section 2. *Offenses.* Any member of a component society shall be subject to censure, suspension or expulsion by such component society when

- A. he has been adjudged guilty by proper civil authorities of a criminal offense involving moral turpitude, or
- B. he has been adjudged guilty by his component society in accordance with the procedural requirement of these bylaws:
 - (1) of a gross misconduct as a physician or surgeon, or
 - (2) of a violation of the Constitution or Bylaws of his component society, or of the Illinois State Medical Society, or of the

Principles of Medical Ethics promulgated from time to time by the American Medical Association.

Section 3. *Charges Initially Presented to the Illinois State Medical Society.* Original complaints received by the Illinois State Medical Society should be referred directly to the secretary of the component society of which the accused is a member and to the appropriate district Ethical Relations Committee.

Section 4. *Principles of Justice.* The following principles of justice shall guide the Ethical Relations Committee in all disciplinary procedures.

- A. An accused is presumed to be innocent until he has been proven guilty.
- B. After charges have been preferred there shall be no evasion of the fact that the respondent is to be tried; that the Ethical Relations Committee before which he is cited to appear is a trial body and that he will be on trial when he appears.
- C. He must be notified by certified mail of the specific charges which are made against him at least ten days before the date set for his trial.
- D. He may not be found guilty of anything not included in the charges preferred against him and presented to him.
- E. All evidence not pertinent to the charge as made shall be considered irrelevant and immaterial . . . it shall be wholly disregarded in the decision.
- F. Testimony not bearing on the charges shall be objected to and if sustained by the trial body, stricken from the records.
- G. The respondent shall be advised of his rights by the trial body, namely: (1) that he may be represented by any member of the society as counsel; (2) that he or his counsel may cross examine witnesses; (3) that he may offer in evidence any records or documents that he deems fit; (4) that he may enter objections as to testimony or to material offered in evidence; (5) that he may address the trial body in his own behalf; (6) and that he has the right of appeal to the Board of Trustees of the Illinois State Medical Society.

Section 5. *Records.* A comprehensive stenographic record of the proceedings must be kept for reference, and shall be available until final adjudication has been made.

Section 6. *Verdict.* The committee, sitting as a trial body, shall find the accused either guilty or not guilty. If the verdict is guilty, the trial body shall recommend censure, suspension or expulsion.

The findings of the trial body must be presented to the component county society for approval or rejection. The accused must be notified by certi-

fied mail at least ten days before the date set for the meeting at which this action will be taken. If the findings of the trial body are against the accused the secretary of the component society shall acquaint the accused, by certified mail, with his right of appeal within thirty days to the Board of Trustees of the Illinois State Medical Society.

PART 2. ILLINOIS STATE MEDICAL SOCIETY PROCEDURES

Section 7. *Illinois State Medical Society Ethical Relations Committee.* The Board of Trustees shall appoint from its members, an Ethical Relations Committee to review matters involving the interpretation of the Principles of Medical Ethics, violations of the Constitution and Bylaws of the Illinois State Medical Society or its component societies, and charges of misconduct of members of the Society.

It shall serve as an appellate body to review cases involving these matters referred by component medical societies, and shall consider only matters of procedure.

Section 8. *Appeals from Component Society Verdicts.* Appeals received by the Illinois State Medical Society Board of Trustees shall be referred to the Ethical Relations Committee of the Board for review. The committee shall notify the accused and the secretary of the component society by certified mail at least ten days prior to the date set for the hearing of the appeal. The chairman of the committee shall preside over the hearing in accordance with the rules established by the Board of Trustees.

Section 9. *Verdict.* On conclusion of the hearing, the Ethical Relations Committee of the Board of Trustees shall meet in executive session to consider its decision, and shall report in writing to the Board at its next meeting for approval or rejection.

Section 10. *Notification of Parties.* The secretary of the Society shall notify the defendant and the secretary of the component society wherein the defendant holds membership, of the action of the Board.

A. *Right of Appeal to the American Medical Association.* In case of findings against the accused, and in support of the action taken by the component society, the secretary of the state society shall notify the accused within ten days by certified mail of his right to appeal to the Judicial Council of the American Medical Association.

B. *Error.* In the event of a decision by the Board of Trustees of improper procedure, by the trial body of the component society, the case shall be remanded to the component society for reconsideration.

CHAPTER XIII. MISCELLANEOUS

Section 1. The fiscal year of this Society shall be from January 1 to December 31 inclusive.

Section 2. Robert's "Rules of Order, Revised," shall be the guide for all procedure when not in conflict with the Consitution and Bylaws.

CHAPTER XIV. AMENDMENTS

The House of Delegates may amend any article of these Bylaws by a two-thirds vote of the delegates present at any meeting, provided that such amendment shall not be acted upon before the day following that on which it was introduced.

ORDER OF BUSINESS OF THE HOUSE OF DELEGATES

First Session

- (1) Call to order.
- (2) Report of Committee on Credentials.
- (3) Roll Call.
- (4) Reading and approval of minutes of last meeting.
- (5) Appointment of Reference Committees.
- (6) Reports of Officers.
- (7) Reports of the Trustees, the Editor, etc.
- (8) Reports of Standing Committees.
- (9) Reports of Board Committees.
- (10) Reports of Special Committees.
- (11) Reading of Resolutions.
- (12) Unfinished Business.
- (13) New Business.
- (14) Recess.

Last Session

- (1) Call to order.
- (2) Report of Committee on Credentials.
- (3) Roll Call.
- (4) Election of Officers.
- (5) Election of Trustees.
- (6) Election of Delegates to the American Medical Association.
- (7) Election of Alternate Delegates to the American Medical Association.
- (8) Election of Standing Committees.
- (9) Fixing per capita tax for ensuing year.
- (10) Selection of meeting place for next annual meeting. (Subject to the investigations of the Board.)
- (11) Reports of Reference Committees.
- (12) Unfinished Business.
- (13) Induction of the President-Elect to the office of President.
- (14) New Business.
- (15) Adjournment.

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HOUSE OF DELEGATES

1966-1967 OFFICERS

Officers

President, Caesar Portes, 25 E. Washington St.,
Chicago 60602
President-Elect, Newton DuPuy, 1101 Maine St.,
Quincy 62301
1st Vice President, Noel G. Shaw, 2901 Central
Ave., Evanston 60201
2nd Vice President, Paul W. Sunderland, Gibson
City 60936
Secretary-Treasurer, Jacob E. Reisch, 1129 S. 2nd
St., Springfield 62704

House of Delegates

Speaker of the House, Edward W. Cannady, 4601
State St., East St. Louis 62205
Vice Speaker, Maurice M. Hoeltgen, 1836 W. 87th
St., Chicago 60620

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2nd District—Ralph N. Redmond, 101 E. Miller
Rd., Sterling1968
3rd District—William M. Lees, 7000 N.
Kenton Ave., Lincolnwood.....1968
Frank J. Jirka, 1507 Keystone Ave.,
River Forest1968
Philip Thomsen, 13828 Lincoln Ave., Dolton.1969
J. Ernest Breed, 55 E. Washington St.,
Chicago1969
William E. Adams, 950 E. 59th St.,
Chicago1967
Ted LeBoy, 330 Gale Ave., River Forest...1967
4th District—Paul P. Youngberg, 1520 Seventh
Ave., Moline1967
5th District—Darrell H. Trumpe, St. John's
Sanatorium, Springfield1967
6th District—Mather Pfeiffenberger, State and Wall
Sts., Alton 620021969
7th District—Arthur F. Goodyear, 142 E.
Prairie Ave., Decatur.....1967
8th District—Wm. H. Schowengerdt, 301 E.
University Ave., Champaign.....1967
9th District—Charles K. Wells, 117 N. 10th St.,
Mt. Vernon1966
10th District—Willard C. Scrivner, 4601 State
St., East St. Louis.....1966
11th District—Joseph R. O'Donnell, 444 Park
Ave., Glen Ellyn1968

TRUSTEE-AT-LARGE, Burtis E. Montgomery, 37 S.
Main St., Harrisburg

CHAIRMAN OF THE BOARD, Arthur F. Goodyear, 142
E. Prairie Ave., Decatur

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H. Close Hesseltine.....1961
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Willis I. Lewis.....1954
George F. Lull1963
Irving H. Neece.....1948
Raleigh C. Oldfield.....1959
Edward A. Piszczek.....1965
Leo P. A. Sweeney.....1953
Arkell M. Vaughn.....1955
C. Paul White.....1952

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Speaker—House of Delegates, AMA
Burtis E. Montgomery (AMA Delegate), (Past
President, ISMS) Trustee, AMA

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PULASKI A. L. Robinson	James G. Conger		
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CHICAGO MEDICAL SOCIETY DELEGATES

<i>Delegate</i>	<i>Alternate</i>	<i>Delegate</i>	<i>Alternate</i>
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Clair M. Carey	Craig D. Butler	Samuel L. Andelman	Carl Hedberg
		William Hutchison	Bernard Peele
		Coye C. Mason	Marvin Rosner
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Philip R. McGuire	Robert Jensik	Anna Marcus	George Rezek
Edward C. Helfers	Eugene J. Ranke	Joseph F. O'Malley	Louis S. Varzino
W. B. Stromberg, Sr.	John B. Murphy	AT-LARGE	
*Karl L. Vehe	Samuel T. Gerber	A. L. Burdick, Sr.	Noel G. Shaw
Joseph R. DeCaro	Frank M. Quinn	Casper Epsteen	Harold A. Sofield
W. O. Ackley	David T. Petty	Warren W. Young	
Philip M. Bedessem	Geo. C. Markoutsas		
George H. Irwin	Rocco V. Lobraico		
Burton Soboroff	Herschel Browns		
C. A. Norberg	Joseph Skom		

*Deceased

DELEGATES AND ALTERNATES TO A.M.A.

(Italics indicate alternates)

(To take office Jan. 1, 1965—

Term expires Dec. 31, 1966)

Elected on May 21, 1964

Maurice M. Hoeltgen, 1836 W. 87th St., Chicago
Theodore R. Van Dellen, 435 N. Michigan Ave.,
Chicago

Leo P. A. Sweeney, 2658 W. 95th St., Evergreen
Park

Allison L. Burdick, Sr., 5906 W. North Ave., Chi-
cago

H. Close Hesseltine, 5807 S. Dorchester Ave., Chi-
cago

Arkell M. Vaughn, 2015 E. 79th St., Chicago

William K. Ford, 303 N. Main St., Rockford

Paul A. Dailey, 620 N. Main St., Carrollton

Burtis E. Montgomery, Harrisburg

Fred C. Endres, 229 E. Glen Ave., Peoria

(To take office Jan. 1, 1966—

Term expires Dec. 31, 1967)

Elected on May 19, 1965

H. Kenneth Scatlift, 1415 Greenleaf Ave., Chicago
Harold A. Sofield, 715 Lake St., Oak Park

Walter C. Bornemeier, 4665 Peterson Ave., Chicago

George C. Turner, 6627 Ponchartrain Ave., Chi-
cago

Frank H. Fowler, 6356 Diversey Ave., Chicago

Edward A. Piszczek, 6410 N. Leona Ave., Chicago

Arthur F. Goodyear, 142 E. Prairie St., Decatur

Newton DuPuy, 1101 Maine St., Quincy

Harlan English, 909 N. Logan Ave., Danville

Jacob E. Reisch, 1129 S. 2nd St., Springfield

Edward W. Cannady, 4601 State St., East St. Louis

Carl E. Clark, Sycamore

(To take office Jan. 1, 1967—

Term expires Dec. 31, 1968)

Elected on May 18, 1966

Maurice M. Hoeltgen, 1836 West 87th St., Chicago
Theodore R. Van Dellen, 435 North Michigan
Ave., Chicago

Leo P. A. Sweeney, 2658 West 95th St., Evergreen
Park

Allison L. Burdick, Sr., 5906 West North Ave.,
Chicago

H. Close Hesseltine, 5807 South Dorchester Ave.,
Chicago

Arkell M. Vaughn, 2015 East 79th St., Chicago

William K. Ford, 303 North Main St., Rockford

Paul A. Dailey, 620 North Main St., Carrollton

Burtis E. Montgomery, Harrisburg

Fred C. Endres, 229 East Glen Ave., Peoria

TRUSTEE DISTRICT COMMITTEES

First District

Carl E. Clark, Sycamore, *Trustee*.

Counties of Boone, Carroll, DeKalb, JoDaviess,
Kane, Lake, McHenry, Ogle, Stephenson, Winne-
bago

Term
Expires

ETHICAL RELATIONS COMMITTEE

John W. Ovitz, *Chairman*, Sycamore.....1968

E. J. McKinney, 2300 N. Rockton,
Rockford1969

Benjamin F. Shirer, 4 W. Wilson St.,
Batavia1967

John H. Steinkamp, Belvidere1969

GRIEVANCE COMMITTEE

Russel Zack, *Chairman*, Medical-Dental Bldg.,
Rochelle1967

A. K. Matthews, 1401 E. State St., Rockford..1969

M. Mijanovich, Marengo.....1968

Walter J. Reedy, 814 Washington St.,
Waukegan1969

PREPAYMENT PLANS & ORGANIZATIONS

Delbert O. Williams, Jr., *Chairman*, Stockton.1968

George B. Callahan, 4 S. Genesee St.,
Waukegan1967

Jerald A. Bowman, 1355 Charles St., Rockford.1968

John E. Madden, 420 S. Harlem Ave.,

Freeport1967

Kenneth L. Morris, 1616 Grand Ave.,
Waukegan 600851969

Rodney Nelson, 127 Hamilton St.,
Geneva 601341969

Erwin A. Schilling, 314 Paris Ave.,
Rockford 611071969

R. E. Whitsitt, 5535 N. 2nd Rockford.....1969

Second District

Ralph N. Redmond, Sterling, *Trustee*.

Counties of Bureau, LaSalle, Lee, Livingston, Mar-
shall, Putnam, Whiteside, Woodford

ETHICAL RELATIONS COMMITTEE

Dexter Nelson, *Chairman*, Princeton.....1968

Ralph Bailey, Ottawa.....1969

Tim Sullivan, Sterling.....1967

GRIEVANCE COMMITTEE

Edward Murphy, *Chairman*, Dixon.....1968

Francis J. Brennan, Utica.....1967

K. M. Nelson, Princeton.....1969

PREPAYMENT PLANS & ORGANIZATIONS

Perry V. Hartman, *Chairman*, Granville.....1968

M. D. Burnstine, Sterling.....1967

Joseph Phifer, Eureka.....1969

Third District

William E. Adams, Chicago
J. Ernest Breed, Chicago
Frank J. Jirka, River Forest
Ted LeBoy, River Forest
William M. Lees, Lincolnwood
Philip Thomsen, Dolton
No district committees are appointed

Fourth District

Paul P. Youngberg, Moline, *Trustee*.
Counties of Fulton, Hancock, Henderson, Henry,
Knox, McDonough, Mercer, Peoria, Rock Island,
Schuyler, Stark, Warren

ETHICAL RELATIONS COMMITTEE

John Bowman, *Chairman*, Abdingdon.....1967
Richard Icenogle, Roseville.....1968
William D. Larsen, Annawan.....1969

GRIEVANCE COMMITTEE

F. A. Christensen, *Chairman*,
First Nat'l Bank Bldg., Peoria.....1969
Russell Jensen, Monmouth.....1967
Elliott Parker, 1630—5th Ave., Moline.....1968

PREPAYMENT PLANS & ORGANIZATIONS

Richard Terry, *Chairman*, Kewanee.....1967
Donald Dexter, Macomb.....1968
William O. McQuiston,
1604 W. Parkside Dr., Peoria.....1969

Fifth District

Darrell H. Trumpe, Springfield, *Trustee*.
Counties of DeWitt, Logan, McLean, Mason, Men-
ard, Montgomery, Sangamon, Tazewell

ETHICAL RELATIONS COMMITTEE

Arthur Conklin, *Chairman*, 219 N. Main St.,
Bloomington1967
William W. Curtis, 100 W. Miller, Springfield.1968
Rudolph A. Helden, 115 S. Capitol St., Pekin.1969

GRIEVANCE COMMITTEE

Clifford Draper, *Chairman*, Hillsboro.....1969
Lee N. Hamm, 113 S. Pine St., Lincoln.....1968
A. J. Morris, 701 N. Walnut St., Springfield..1967

PREPAYMENT PLANS & ORGANIZATIONS

J. G. Meyer, Jr., *Chairman*,
413 W. Monroe St., Springfield.....1969
Robert B. Perry, 315 Broadway, Lincoln.....1967
Robert Price, 216 E. Washington,
Bloomington1968

Sixth District

Mather Pfeiffenberger, Alton, *Trustee*
Counties of Adams, Brown, Calhoun, Cass, Greene,
Jersey, Macoupin, Madison, Morgan, Pike, Scott

ETHICAL RELATIONS COMMITTEE

Leo R. Green, *Chairman*,
1114 Milton Rd., Alton.....1969
Bernard Baalman, Hardin.....1968
W. W. Bowers, 1820 Delmar St.,
Granite City1967

GRIEVANCE COMMITTEE

Robert R. Hartman, *Chairman*,
316 W. State St., Jacksonville.....1969
Edward K. DuVivier, 1900 Brown St., Alton..1968
Robert C. Murphy, 1416 Maine St., Quincy...1967

PREPAYMENT PLANS & ORGANIZATIONS

E. C. Bone, *Chairman*,
800 W. State St., Jacksonville.....1967
Jude A. Caselton
419 N. Main St., Carrollton 62016.....1969
Frank B. Norbury
1515 W. Walnut St., Jacksonville 62650...1969
Paul A. Dailey, 620 N. Main St., Carrollton...1968

Seventh District

Arthur F. Goodyear, Decatur, *Trustee*.
Counties of Bond, Christian, Clay, Clinton, Effing-
ham, Fayette, Macon, Marion, Moultrie, Piatt,
Shelby

ETHICAL RELATIONS COMMITTEE

Kenneth Pistorius, *Chairman*, Moweaqua....1967
Max Hirschfelder, Centralia.....1968
E. H. Rames, Vandalia.....1969

GRIEVANCE COMMITTEE

Karl D. Venters, *Chairman*, Centralia.....1967
Boyd McCracken, Greenville.....1968
William Sargent, Effingham.....1969

PREPAYMENT PLANS & ORGANIZATIONS

Philip Lynch, *Chairman*,
1315 N. Main St., Decatur.....1969
Richard Larson, Shelbyville.....1968
Peter Rumore, Effingham.....1967

Eighth District

William H. Schowengerdt, Champaign, *Trustee*.
Counties of Champaign, Clark, Coles, Crawford,
Cumberland, Douglas, Edgar, Jasper, Lawrence,
Richland, Vermilion

ETHICAL RELATIONS COMMITTEE

Mack W. Hollowell, *Chairman*,
35 Circle Dr., Charleston.....1968
E. A. Fahnstock, Bridgeport.....1969
Alan M. Taylor, 909 N. Logan, Danville....1967

GRIEVANCE COMMITTEE

A. R. Brandenberger, *Chairman*,
605 N. Logan Ave., Danville.....1968
Eugene Johnson, Casey.....1969
Gordon Sprague, Paris.....1967

PREPAYMENT PLANS & ORGANIZATIONS

James W. Landis, *Chairman*, Olney.....1968
N. L. Brookens, 602 W. University Ave.,
Urbana1969
E. A. Kendall, Mattoon.....1967
George T. Mitchell, 116 S. 5th St., Marshall..1969

Ninth District

Charles K. Wells, Mt. Vernon, *Trustee*.
Counties of Edwards, Franklin, Gallatin, Hamilton,
Hardin, Jefferson, Johnson, Massac, Pope, Saline.
Wabash, Wayne, White, Williamson
ETHICAL RELATIONS COMMITTEE
G. R. Johnson, *Chairman*, Harrisburg.....1968
John P. Pope, Benton.....1969
N. A. Thompson, Eldorado.....1967

GRIEVANCE COMMITTEE
C. J. Jannings, *Chairman*, Fairfield.....1967
Herbert Fine, Carterville.....1969
Herman Rogers, TB Sanitarium, Mt. Vernon..1968
PREPAYMENT PLANS & ORGANIZATIONS
Denton Ferrell, *Chairman*, Eldorado.....1968
H. L. Lewis, Benton.....1967
A. Watson Miller, Herrin.....1969

Tenth District

Willard C. Scrivner, East St. Louis, *Trustee*.
Counties of Alexander, Jackson, Monroe, Perry,
Pulaski, Randolph, St. Clair, Union, Washington
ETHICAL RELATIONS COMMITTEE
A. L. Robinson, *Chairman*, Mounds.....1967
William Borgsmiller, Murphysboro.....1969
Harold E. McCann, 2720 State St.,
East St. Louis.....1968
GRIEVANCE COMMITTEE
R. E. Matlavish, *Chairman*, DuQuoin.....1967

William H. Walton, 109 S. High St.,
Belleville1969
William H. Whiting, Anna.....1968
PREPAYMENT PLANS & ORGANIZATIONS
James A. Weatherly, *Chairman*, Murphysboro.1967
R. W. Jost, 107 E. 4th St., Waterloo.....1969
R. E. Schettler, Red Bud.....1968

Eleventh District

Joseph R. O'Donnell, Glen Ellyn, *Trustee*.
Counties of DuPage, Ford, Grundy, Iroquois, Kan-
kakee, Kendall, Will
ETHICAL RELATIONS COMMITTEE
Donald A. Meier, *Chairman*,
555 S. Schuyler Ave., Kankakee.....1969
Leonard F. Roblee, Lockport.....1967
Paul W. Sunderland, 214 N. Sangamon,
Gibson City1968
GRIEVANCE COMMITTEE
Morgan M. Meyer, *Chairman*, Lombard.....1967
Samuel J. Goldhaber
28 N. Joliet St., Joliet.....1969
R. Kent Swedlund, Watseka.....1968
PREPAYMENT PLANS & ORGANIZATIONS
Charles Allison, *Chairman*, 1309 E. Court St.,
Kankakee1969
James E. Dailey, 845 S. Fourth St., Watseka.1969
J. M. Stoker, 172 Schiller, Elmhurst.....1968
George H. Woodruff, 250 N. Ottawa St.,
Joliet1967

OFFICERS OF COUNTY MEDICAL SOCIETIES---1966

ADAMS COUNTY
President: Bruce W. Johnson, 603 Illinois Bank
Bldg., Quincy 62301
Secretary: George H. Eversman, 1415 Vermont
St., Quincy 62301
Members: 74—District #6
ALEXANDER COUNTY
President: Lewis Ent, 309 Eighth St., Cairo
62914
Secretary: James Crouse, 120½ Washington,
Cairo 62914
Members: 10—District #10
BOND COUNTY
President: M. Kenneth Kaufmann, 207 N. Second
St., Greenville 62246
Secretary: Charles R. Daisy, 308 W. College,
Greenville 62246
Members: 8—District #7
BOONE COUNTY
President: Maurice Carlisle, 115 W. Lincoln, Bel-
videre 61008
Secretary: Earl S. Davis, 119 S. State St., Bel-
videre 61008
Members: 14—District #1

BUREAU COUNTY
President: W. E. Erkonen, 101 Park Ave., East,
Princeton 61356
Secretary: Karl D. Nelson, 101 Park Ave., East,
Princeton 61356
Members: 29—District #2
CARROLL COUNTY
President: E. M. Colli, RFD 1, Mt. Carroll 62863
Secretary: Wilhelm F. Jawurek, Chadwick 61014
Members: 11—District #1
CASS COUNTY
President: Robert A. Spencer, Beardstown 62618
Secretary: Arthur G. Hyde, Beardstown 62618
Members: 14—District #6
CHAMPAIGN COUNTY
President: E. M. Collins, 104 W. Clark St.,
Champaign 61820
Secretary: H. E. Wachter, 104 W. Clark St.,
Champaign 61820
Members: 159—District #8

CHICAGO MEDICAL SOCIETY

President: Warren W. Young, 310 S. Michigan Ave., Chicago
President-Elect: Francis W. Young, 310 S. Michigan Ave., Chicago
Secretary: Fred A. Tworoger, 310 S. Michigan Ave., Chicago
Treasurer: H. Kenneth Scatliff, 310 S. Michigan Ave., Chicago
Executive Administrator: John W. Neal, 310 S. Michigan Ave., Chicago
Members: 6,515—District #3

CHRISTIAN COUNTY

President: R. B. Siegert, 217 S. Locust, Pana 62557
Secretary: J. W. Murphy, 301 S. Webster, Taylorville 62568
Members: 29—District #7

CLARK COUNTY

President: Eugene P. Johnson, Casey 62410
Secretary: Charles C. Moore, Jr., Martinville Clinic, Martinville 62442
Members: 7—District #8

CLAY COUNTY

President: William T. Kamp, 433 E. 7th St., Flora 62839
Secretary: Donald L. Bunnell, 433 E. 7th St., Flora 62839
Members: 15—District #7

CLINTON COUNTY

President: Wilson L. DuComb, Carlyle 62231
Secretary: J. Roger Sosa, Germantown 62245
Members: 10—District #7

COLES-CUMBERLAND COUNTY

President: L. R. Montemayor, 1527 First St., Charleston 61920
Secretary: G. D. Wright, 1517 University Ave., Charleston 61920
Members: 43—District #8

CRAWFORD COUNTY

President: Charles Salesman, 1201 N. Allen, Robinson 62454
Secretary: John W. Long, Robinson 62454
Members: 17—District #8

DEKALB COUNTY

President: Edward Dolaz, 232 S. 2nd St., DeKalb 60115
Secretary: Robert H. Pribble, DeVal Shopping Center, DeKalb 60115
Members: 49—District #1

DEWITT COUNTY

President: John W. Veirs, 219 E. Main, Clinton 61727
Secretary: Charles Ramey, 215 E. Main, Clinton 61727
Members: 12—District #5

DOUGLAS COUNTY

President: Walter G. Steiner, 140 W. Sale, Tuscola 61953
Secretary: Travis L. Hindman, 207 E. Van Allen, Tuscola 61953
Members: 15—District #8

DUPAGE COUNTY

President: J. P. Schweitzer, 120 Oak Brook Center Mall, Oak Brook 60523
Secretary: Charles A. Lang, 222 E. Willow, Wheaton 60187
Corresponding Secretary: Mrs. Lillian Widmer, 222 E. Willow, Wheaton 60187
Members: 292—District #11

EDGAR COUNTY

President: Gordon H. Sprague, Box 298, 502 Shaw Ave., Paris 61944
Secretary: K. M. Ingalls, 502 Shaw Ave., Paris 61944
Members: 12—District #8

EDWARDS COUNTY

President: C. P. Salisbury, 10 S. Fourth St., Albion 62806
Secretary: Andrew Krajec, Box 336, West Salem 62476
Members: 4—District #9

EFFINGHAM COUNTY

President: James R. Gartner, 300 N. Maple, Effingham 62401
Secretary: Herbert F. Webb, 300 N. Maple St., Effingham 62401
Members: 22—District #7

FAYETTE COUNTY

President: J. H. Weiner, 503 Gallatin, Vandalia 62471
Secretary: E. A. Keuhn, 501½ W. Gallatin, Vandalia 62471
Members: 12—District #7

FORD COUNTY

President: Paul Sunderland, 214 N. Sangamon St., Gibson City 60936
Secretary: Alan Olson, 120 N. Center, Paxton 60957
Members: 11—District #11

FRANKLIN COUNTY

President: O. H. Taylor, 118½ Main St., West Frankfort 62896
Secretary: John B. Moore, Benton 62812
Members: 22—District #9

FULTON COUNTY

President: Carlos Almeida, 106 Martin, Canton 61520
Secretary: O. M. Wood, Ipava 61441
Members: 26—District #4

GALLATIN COUNTY

President: John Doyle, Ridgway 62979
Secretary: W. F. Stanelle, Shawneetown 62984
Members: 4—District #9

GREENE COUNTY

President: F. Earl Walker, 213 W. Clay St.,
Roodhouse 62082
Secretary: Paul A. Dailey, 620 N. Main St.,
Carrollton 62016
Members: 8—District #6

HANCOCK COUNTY

President: Werner Schoenherr, Main St., Bowen
62316
Secretary: Ilse Erika Brueshel, Warsaw 62379
Members: 13—District #4

HENDERSON COUNTY

President: Elmer Swann, Oquawka 61469
Secretary: Harold L. Bock, Stronghurst 61480
Members: 3—District 4

HENRY COUNTY

President: Sandor Apathy, 304 Main St., Brad-
ford 61421
Secretary: A. W. Wellstein, 213 W. First St.,
Geneseo
Members: 35—District #4

IROQUOIS COUNTY

President: H. J. Barnett, Ashkum 60911
Secretary: Kent Swedlund, Watseka 60970
Members: 22—District #11

JACKSON COUNTY

President: Martin Van Brown, P.O. Box 1030,
Carbondale 62901
Secretary: Donald Darling, P.O. Box 1030, 404
W. Main St., Carbondale 62901
Members: 48—District #10

JASPER COUNTY

President: Don Hartrich, 625 N. Jourdan, New-
ton 62448
Secretary: C. O. Absher, Newton 62448
Members: 4—District #8

JEFFERSON-HAMILTON COUNTY

President: Allan Anderson, 117 N. 10th St., Mt.
Vernon 62864
Secretary: H. Goff Thompson, 112 N. 11th St.,
Mt. Vernon 62864
Members: 22—District #9

JERSEY-CALHOUN COUNTY

President: Henry Popielewski, Hardin 62047
Secretary: W. Clark Doak, 111 S. Washington
St., Jerseyville 62052
Members: 10—District #6

JO DAVIESS COUNTY

President: David Hockman, 300 Summit St.,
Galena 61036
Secretary: William G. Gillies, 300 Summit St.,
Galena 61036
Members: 11—District #1

JOHNSON COUNTY

President: E. A. Veach, Vienna 62995
Secretary: E. A. Veach, Vienna 62995
Members: 3—District #9

KANE COUNTY

President: R. W. Ollayos, 806 W. Highland Ave.,
Elgin 60120
Secretary: John Abell, 1870 W. Galena Blvd.,
Aurora 60506
Corresponding Secretary: Elsa Carlson, 17 N.
Sixth St., Geneva 60134
Members: 246—District #1

KANKAKEE COUNTY

President: A. A. Palow, 310 S. Schuyler, Kanka-
kee 60901
Secretary: Herbert P. Swartz, 450 Kennedy Dr.,
Kankakee 60901
Members: 80—District #11

KENDALL COUNTY

President: Walter Brill, Main St., Oswego 60543
Secretary: Walter Brill, Main St., Oswego 60543
Members: 9—District #11

KNOX COUNTY

President: R. L. Cannon, 511 Bondi Bldg., Gales-
burg 61401
Secretary: John J. Holland, 511 Bondi Bldg.,
Galesburg 61401
Members: 60—District #4

LAKE COUNTY

President: Glen Harrison, 1616 Grand Ave.,
Waukegan 60085
Secretary: Richard Hawkins, 535 W. Park Ave.,
Libertyville 60048
Executive Secretary: Mrs. Julie P. Schulz, P.O.
Box 148, Gurnee 60031
Members: 234—District #1

LA SALLE COUNTY

President: Margaret Stanmar, 1608 S. Vincent's
Ave., LaSalle 61301
Secretary: Allan L. Goslin, 712 N. Bloomington,
Streator 61364
Members: 106—District #2

LAWRENCE COUNTY

President: C. G. Stoll, 802 Jefferson St., Law-
renceville 62439
Secretary: E. A. Fahnestock, 627 Judy Ave.,
Bridgeport 62417
Executive Secretary: Ruth E. Gariepy, Lawrence
City Memorial Hospital, Lawrenceville
Members: 11—District #8

LEE COUNTY

President: Donald Edwards, 821 S. Peoria Ave.,
Dixon 61021
Secretary: George Silvest, 114 E. Everett Ave.,
Dixon 61021
Members: 21—District #2

LIVINGSTON COUNTY

President: Andrew McGee, 717 N. Main, Pon-
tiac 61764
Secretary: George T. Crout, 200 N. Jackson,
Flanagan 61740
Members: 30—District #2

LOGAN COUNTY

President: Robert Trapp, 514 Pekin St., Lincoln 62656
 Secretary: Glen Tomlinson, 301 Walnut St., Lincoln 62656
 Members: 25—District #5

MACON COUNTY

President: Carl Sandburg, 1600 E. Lincoln, Decatur 62521
 Secretary: Paul Reeder, 2113 N. Edward, Decatur 62526
 Executive Secretary: Mary J. Bretz, 1800 E. Lake Shore Dr., Decatur 62521
 Members: 136—District #7

MACOUPIN COUNTY

President: F. E. Anspaugh, Virden 62690
 Secretary: J. J. Grandone, 109 W. Pine, Gillespie 62033
 Members: 25—District #6

MADISON COUNTY

President: Abron Grandia, 604 E. Broadway, Alton 62002
 Secretary: Leo R. Green, 1114 Milton Rd., Alton 62005
 Members: 127—District #6

MARION COUNTY

President: John A. Stedelin, 130 S. Lincoln, Centralia 62801
 Secretary: O. J. Burroughs, 202 E. Third St., Centralia 62801
 Members: 31—District #7

MASON COUNTY

President: Henry Maxfield, Mason City 62664
 Secretary: J. W. McHarry, 115 S. Orange St., Havana 62644
 Members: 12—District #5

MASSAC COUNTY

President: James Bremer, 803 Market St., Metropolis 62960
 Secretary: Edward Schaurte, Massac Memorial Hospital, Metropolis 62960
 Members: 8—District #9

MCDONOUGH COUNTY

President: Roscoe Millet, 215 E. Carroll, Macomb 61455
 Secretary: Frank De Rango, 531 E. Grant, Macomb 61455
 Members: 21—District #4

MCHENRY COUNTY

President: R. S. Loewenherz, 154 Lincoln Pkwy., Crystal Lake 60014
 Secretary: Mladen Mijanovich, Marengo 60152
 Executive Secretary: Evelyn Rosulek, 308 Kimball Ave., Woodstock
 Members: 60—District #1

MCLEAN COUNTY

President: G. J. O'Neil, 429 N. Main St., Bloomington 61701
 Secretary: Preston Houk, 429 N. Main St., Bloomington 61701
 Executive Secretary: David W. Meister, 429 N. Main St., Bloomington 61701
 Members: 90—District #5

MENARD COUNTY

President: Paul L. Purdy, 116 N. 5th St., Petersburg 62675
 Secretary: H. K. Moulton, 119 N. 7th, Petersburg 62675
 Members: 3—District #5

MERCER COUNTY

President: John Bohan, Alexis 61412
 Secretary: J. W. Hastings, 209 S. College, Aledo 61231
 Members: 5—District #4

MONROE COUNTY

President: Edward Schaller, Waterloo 62298
 Secretary: F. W. Gebhardt, 317 S. Carl, Columbia 62236
 Members: 9—District 10

MONTGOMERY COUNTY

President: Ernest Frank, St. Francis Hospital, Litchfield 62056
 Secretary: George Telfer, 400 Rountree, Hillsboro 62049
 Members: 16—District #5

MORGAN COUNTY

President: Oscar C. Zink, Jr., 316 W. State St., Jacksonville 62650
 Secretary: Robert H. Kooiker, 801 Lincoln Ave., Jacksonville 62650
 Members: 44—District #6

MOULTRIE COUNTY

President: H. E. Kendall, Sullivan 61951
 Secretary: Dean McLaughlin, Sullivan 61951
 Members: 6—District #7

OGLE COUNTY

President: L. Thomas Koritz, Rochelle 61068
 Secretary: Don E. Hinderliter, 400 May Mart Dr., Rochelle 61068
 Members: 21—District #1

PEORIA COUNTY

President: Clinton S. M. Koerner, 427 First National Bank Bldg., Peoria 61602
 Secretary: Paul R. Dirkse, 427 First National Bank Bldg., Peoria 61602
 Executive Secretary: David W. Meister, 427 First National Bank Bldg., Peoria 61602
 Members: 239—District #4

PERRY COUNTY

President: J. A. Mathis, Pinckneyville Medical Group, Pinckneyville 62274
 Secretary: J. B. Stotlar, Medical Arts Bldg., Pinckneyville 62274
 Members: 14—District #10

PIATT COUNTY

President: Joseph Allman, 121 N. State St., Monticello 61856
 Secretary: W. E. Mundt, 499 N. Chapter St., Monticello 61856
 Members: 9—District #7

PIKE COUNTY

President: Warren Barrow, 321 W. Washington, Pittsfield 62363
 Secretary: Thomas C. Bunting, 321 W. Washington, Pittsfield 62363
 Members: 12—District #6

PULASKI COUNTY

President: James Conger, Mounds 62964
 Secretary: Alphonso Robinson, Mounds 62964
 Members: 2—District #10

RANDOLPH COUNTY

President: A. C. Scott, Evansville 62242
 Secretary: C. S. Schlageter, 597 S. Gordon St., Sparta 62286
 Members: 15—District #10

RICHLAND COUNTY

President: Wayne Moulton, 600 E. Main St., Olney 62450
 Secretary: Thomas Benson, 600 E. Main St., Olney 62450
 Members: 24—District #8

ROCK ISLAND COUNTY

President: Loring Helfrich, 3637—23rd Ave., Moline 61265
 Secretary: Gerald S. Laros, 1504—7th St., Moline 61265
 Members: 136—District #4

ST. CLAIR COUNTY

President: William Walton, 109 High St., Belleville 62220
 Secretary: Charles Frazer, 258 N. 14th St., East St. Louis 62201
 Executive Secretary: Gene Conrad, 4825 W. Main St., Belleville 62223
 Members: 167—District #10

SALINE-POPE-HARDIN COUNTY

President: L. J. Pearce, 1901 Organ St., Eldorado 62930
 Secretary: William R. Durham, 109 N. McKinley, Harrisburg 62946
 Members: 20—District #9

SANGAMON COUNTY

President: Franz K. Fleischli, 701 S. Second St., Springfield 62704
 Secretary: David B. Lewis, Memorial Hospital, Springfield 62705
 Members: 186—District #5

SCHUYLER COUNTY

President: Rosemary Utter, Rushville 62681
 Secretary: Henry C. Zingher, Rushville Clinic, Rushville 62681
 Members: 5—District #4

SHELBY COUNTY

President: Richard Jones, Cowden 62422
 Secretary: Richard Larson, 400 S. Walnut, Shelbyville 62565
 Members: 15—District #7

STEPHENSON COUNTY

President: Hyman R. Osheroff, 420 S. Harlem, Freeport 61032
 Secretary: John E. Madden, 420 S. Harlem, Freeport 61032
 Members: 40—District #1

TAZEWELL COUNTY

President: Rudolph A. Helden, 427 First National Bank Bldg., Peoria 61602
 Secretary: Erik Maran, 427 First National Bank Bldg., Peoria 61602
 Executive Secretary: David W. Meister, 427 First National Bank Bldg., Peoria 61602
 Members: 44—District #5

UNION COUNTY

President: William H. Whiting, Box 410, Anna 62906
 Secretary: William H. Whiting, Box 410, Anna 62906
 Members: 10—District #10

VERMILION COUNTY

President: Earle E. McDonnell, 101 W. North St., Danville 61833
 Secretary: L. W. Tanner, 7 N. Virginia, Danville 61832
 Members: 87—District #8

WABASH COUNTY

President: W. L. Walling, Grayville 62844
 Secretary: C. L. Johns, 114 W. Fifth, Mt. Carmel 62863
 Members: 5—District #9

WARREN COUNTY

President: Russell Jensen, 319 S. Main, Monmouth 61462
 Secretary: Glenn Chamberlin, 219 E. Euclid, Monmouth 61462
 Members: 13—District #4

WASHINGTON COUNTY

President: Peter Fajans, Okawville 62271
 Secretary: W. P. Lesko, 112 N. Mill, Nashville 62263
 Members: 7—District #10

WAYNE COUNTY

President: S. W. Konarski, 101 E. Center St.,
Fairfield 62837
Secretary: Edward Talaga, 101 E. Center St.,
Fairfield 62837
Members: 8—District #9

WHITE COUNTY

President: R. C. Brown, Carmi Medical Center,
Carmi 62821
Secretary: J. G. Harrell, Carmi 62821
Members: 8—District #9

WHITESIDE COUNTY

President: J. R. Erickson, 101 E. Miller Rd.,
Sterling 61081
Secretary: E. R. Picken, 101 E. Miller Rd.,
Sterling 61081
Members: 44—District #2

WILL-GRUNDY COUNTY

President: Robert Geist, Jr., 120 Scott St., Joliet
60431
Secretary: Howard G. Reiser, 1000 W. Jefferson,
Joliet 60435
Executive Director: Robert Best, 305 N. Ottawa
St., Joliet 60435
Members: 167—District #11

WILLIAMSON COUNTY

President: Howard C. Dibble, 202½ W. Main
St., Marion 62956
Secretary: Herbert V. Fine, 110 Division, Car-
terville 62918
Members: 25—District #9

WINNEBAGO COUNTY

President: Robert E. Heerens, 1335 Charles St.,
Rockford 61108
Secretary: John R. West, 6670 E. State St.,
Rockford 61108
Executive Administrator: Donald A. Westbrook,
310 N. Wyman St., Rockford 61101
Members: 249—District #1

WOODFORD COUNTY

President: H. T. Barrett, Minonk 61760
Secretary: Victor Jay, 601 N. Jefferson, Wash-
burn 61570
Members: 14—District #2

NO ORGANIZED SOCIETY

Brown
Hardin
Marshall
Pope
Putnam
Scott
Stark

JOINT COUNTY SOCIETIES

Coles-Cumberland
Jefferson-Hamilton
Jersey-Calhoun
Will-Grundy

ILLINOIS MEDICAL ASSISTANTS ASSOCIATION

The Illinois Medical Assistants Association is just what the name implies—an Association of Medical Assistants throughout the State of Illinois who have become an educational organization with objectives as follows: (a) To bring into one association all medical assistant organizations of the State of Illinois; (b) to provide an organization for those residing in Illinois counties where no medical assistants societies are organized; (c) to assist the physicians in improving medical public relations; (d) to maintain and advance the standards of professional employment and to give honest, loyal and efficient service to the medical profession and the public; (e) to meet from time to time to secure interchange of ideas.

The medical assistant associations are educational groups—not social. *We are not a union and any attempt to promote the unionization of this society or its members automatically forfeits the membership of the person or persons making such an attempt.*

For the first time the qualified medical assistant has been given an opportunity to pass a special board examination and thus become a "Certified Medical Assistant." This will affect directly or

indirectly every physician's office. Of note is the fact that you do not have to belong to the Association to take this examination. For further information as to qualifications necessary to take the examination write to American Association of Medical Assistants, 510 North Dearborn Street, Chicago 10, Illinois.

Local programs in the component societies of IMAA are geared to the needs of that particular area. Obviously the strictly specialist areas would have entirely different problems and educational needs than the area of the general practitioner where the office is staffed by one or two medical assistants. Hence the educational programs in your area would be decided by your own Medical Assistants and supervised by the doctors in your own county society.

We need you, Doctor, to encourage your medical assistants to join our association. But also you could help us by assisting us in selecting the proper educational programs which in the long run would be of most benefit to you. That is our whole purpose, to become better medical assistants so we can help you to help your patients.

ILLINOIS STATE MEDICAL SOCIETY COMMITTEES

Committees of the Illinois State Medical Society are either provided for in the bylaws of the Society or are appointed by the Board of Trustees. Members of committees provided for in the bylaws are either elected by the House of Delegates or appointed by the Board of Trustees for three-year terms. All other committees are appointed by the Board annually.

COMMITTEE ON AGING (Board of Trustees)

William K. Ford, *Chairman*
303 N. Main St., Rockford
Preston V. Dilts
1025 S. Seventh St., Springfield
Edward E. Gordon
Room 100, Michael Reese Hospital, Chicago 60616
John B. Huss
172 Schiller, Elmhurst
Stefan Hyk
Griggsville
Henry T. Ricketts
950 E. 59th St., Chicago
Roger F. Sondag
518 State Office Bldg., Springfield
Thomas T. Tourlentes
Research Hospital, Galesburg
Henry M. Wilson, Jr.
1101 Main St., Peoria
Albyn G. Wolfe
120 Dunlap Ct., Jacksonville 62650

CONSULTANT:

Edward W. Cannady
4601 State St., East St. Louis

AUXILIARY REPRESENTATION:

Mrs. Howard A. Lowy
112 Pekin Ave., East Peoria

STAFF: Walter R. Livingston

Responsibilities and Purposes

The functions of the Committee on Aging encompass the broad field of aging with special consideration for the types of medical services and patterns of care available to the aging and the economics involved. The committee cooperates with the American Medical Association's Committee on Aging and other appropriate agencies.

Included among the committee's activities are the study and support of expansion of additional home care programs in Illinois; relationships with nursing homes, home nursing, homemaker programs, and other programs involving services oriented toward the aging; and liaison with other agencies having a similar interest.

COMMITTEE ON ALCOHOLISM (Board of Trustees)

Abraham Gelperin, *Chairman*
Welfare Council of Metropolitan Chicago
123 W. Madison St., Chicago 60602
Charles L. Anderson
120 N. Oak St., Hinsdale 60521

Gerald H. Becker
111 N. Wabash Ave., Chicago 60602
Richard S. Cook
230 N. Michigan Ave., Chicago
Robert A. Moore
Swedish American Hospital, Rockford 61101
Jackson A. Smith
Loyola University, Stritch School of Medicine,
P.O. Box 1336, Hines 60141
John C. Troxel
425 N. Michigan Ave., Chicago 60690
Frank J. Walsh
6445 North Ave., Oak Park
William H. Wehrmacher
670 N. Michigan Ave., Chicago 60611
STAFF: Albert G. Boeck

Responsibilities and Purposes

The Committee on Alcoholism serves as a resource on alcoholism for ISMS and evaluates information and makes recommendations to the Board of Trustees for the position ISMS should take on issues in this area. It cooperates with institutions, industry, government and health agencies in disseminating information on the causes, prevention, diagnosis and treatment of alcoholism to the medical profession and the public.

COMMITTEE ON ARCHIVES (Bylaws)

	Term Expires
James H. Hutton, <i>Chairman</i> 67 E. Madison St., Chicago 60603	1967
Carl W. Hagler 2015 Grove Ave., Quincy 62301	1968
Clifford E. Smith 261 E. Lincoln Hwy., DeKalb	1968
Leo Zimmerman 55 E. Washington St., Chicago	1969
STAFF: Paul S. Swarts	

Responsibilities and Purposes Described in Constitution and Bylaws

SUBCOMMITTEE ON MUSEUM OF MEDICAL HISTORY

The Committee on the Museum of Medical History shall be a subcommittee of the Archives Committee, and shall be responsible for the establishment of a Museum of Medical Progress in Illinois. It shall collect items of medical historical importance and cooperate with the Historical Museum of the State of Illinois and various historical societies in the

education of the public on the importance of medicine as it pertains to the documentation of the progress which has been made in the care and treatment of patients in Illinois.

BENEVOLENCE COMMITTEE

(Bylaws)

	Term Expires
Keith H. Frankhauser, <i>Chairman</i> Avon	1967
Raleigh C. Oldfield 715 Lake St., Oak Park	1969
John H. Steinkamp 824 Van Buren St., Belvidere	1968
STAFF: Paul S. Swarts	

*Responsibilities and Purposes Described in
Constitution and Bylaws*

COMMITTEE ON CANCER CONTROL

(Board of Trustees)

Andrew J. Toman, <i>Chairman</i> 6738 W. Cermak Rd., Berwyn 60402
Michael H. Boley 2333 N. Cleveland Ave., Chicago 60614
Warren H. Cole 840 S. Wood St., Chicago
Angelo P. Creticos 67 E. Madison St., Chicago 60603
Robert E. Field 13000 S. Maple Ave., Blue Island
Russell M. Jensen 319 N. Main St., Monmouth
Roland A. Kowal 505 S. Oak Park Ave., Oak Park 60302
R. G. Mrazek 3237 S. Oak Park Ave., Berwyn 60403
Wilson R. Scott Carbondale Clinic, Carbondale
Thomas Sellett 101 E. Miller Rd., Sterling
R. F. Sondag 518 State Office Bldg., Springfield
Caesar Sweitzer 251 E. Chicago Ave., Chicago 60611

CONSULTANTS:

J. Ernest Breed 55 E. Washington St., Chicago
Caesar Portes 25 E. Washington St., Chicago

AUXILIARY REPRESENTATION:

Mrs. Richard Icenogle Box 188, Roseville 61473

STAFF: Albert G. Boeck

Responsibilities and Purposes

The committee shall serve as a source of information on cancer matters for the ISMS. It shall evaluate available information and make recommenda-

tions to the Board on the position the ISMS should take in this area of scientific endeavor. It shall cooperate with institutions and voluntary health agencies in disseminating information on cancer subjects to the profession and to the public. It shall be on the alert for misleading or fallacious programs and information which need correction for the protection of the public.

COMMITTEE ON CARDIOVASCULAR DISEASE

(Board of Trustees)

Oglesby Paul, <i>Chairman</i> 303 E. Superior St., Chicago
Wright Adams 950 E. 59th St., Chicago
Kurt Biss DeKalb Clinic, DeKalb
E. L. Borkon Carbondale Clinic, Carbondale 62901
Hugh S. Espey 25 Lincoln Hill, Quincy
Charles A. Gianasi 619 W. Deming Pl., Chicago
Arnold S. Moe 4601 State St., East St. Louis
Roy G. Nagle 707 N. Fairbanks Ct., Chicago 60611
A. Paul Naney 433 E. 7th, Flora
Eugene Scherba 13826 Lincoln Ave., Dolton
STAFF: Albert G. Boeck

Responsibilities and Purposes

The committee shall serve as a source of information on cardiovascular disease matters for the ISMS. It shall evaluate available information and make recommendations to the Board for the position the ISMS should take on issues in this area of scientific endeavor. It shall cooperate with institutions and voluntary health agencies in disseminating information on cardiovascular subjects to the profession and to the public. It shall be on the alert for misleading or fallacious programs and information which need correction for the protection of the public.

COMMITTEE ON CHILD HEALTH

(Board of Trustees)

Ralph H. Kunstadter, <i>Chairman</i> 664 N. Michigan Ave., Chicago
Irving Abrams 6342 Sheridan Rd., Chicago
William J. Ball 143 S. Lincoln, Aurora
Oliver W. Crawford 3233 South Parkway, Chicago
Eugene F. Diamond 11055 S. St. Louis Ave., Chicago

Richard E. Dukes
602 W. University Ave., Urbana

W. W. Fullerton
101 N. Market St., Sparta

Robert C. Hamilton
25 E. Washington St., Chicago 60602

Edmond R. Hess
1737 W. Howard St., Chicago

H. R. Hone
151 Herriek Rd., Riverside

Eduard Jung
13826 Lincoln Ave., Dolton

Edward F. Lis
840 S. Wood St., Chicago

Fred Long
2116 N. Sheridan Rd., Peoria

J. Keller Mack
922 S. 4th St., Springfield

Franklin A. Munsey
1429 Myott Ave., Rockford

Kenneth S. Nolan
172 Schiller St., Elmhurst

T. A. Palus
101 Orchard Terr., Lombard

Leo G. Perucca
602 W. University Ave., Urbana

Walter G. Steiner
140 W. Sale St., Tuscola

Norman T. Welford
656—58th St., Hinsdale

W. M. Whitaker
1416 Maine St., Quincy

STAFF: Albert G. Boeck

Responsibilities and Purposes

The committee shall serve as a source of information on matters pertaining to child health. It shall evaluate available information and make recommendations to the Board for the position the ISMS should take on issues in this area and co-operate with institutions and voluntary health agencies in disseminating information pertinent to general child health. It shall be on the alert for misleading or fallacious programs and information which need correction for the protection of the public. It shall conduct educational programs for public enlightenment for the encouragement and the establishment of school health councils; and strive for increased services for exceptional children. It shall conduct, in cooperation with the Maternal Welfare Committee, research on neonatal mortality through the state; and seek the formulation and adoption of uniform school health records.

COMMITTEE TO STUDY COMMITTEES (Board Members Only)

Wm. H. Schowengerdt, *Chairman*
301 E. University Ave., Champaign

Ted LeBoy
330 Gale Ave., River Forest

Joseph R. O'Donnell
444 Park Ave., Glen Ellyn

Darrell H. Trumpe
St. John's Sanatorium, Springfield

Charles K. Wells
117 N. 10th St., Mt. Vernon

STAFF: Frances C. Zimmer

Responsibilities and Purposes

This committee is composed of board members appointed for a term of one year by the chairman. Its duties include an annual review of the committee structure, the functions and the definitions of the committees of the board and also of the House of Delegates as defined in the bylaws. It makes recommendations to the board, and its report to the House of Delegates is presented as a part of the report of the Chairman of the Board of Trustees.

COMMITTEE ON CONSTITUTION AND BYLAWS

(Bylaws)

	Term Expires
Andrew J. Brislen, <i>Chairman</i> 6060 S. Drexel Blvd., Chicago	1968
David S. Fox 826 E. 61st St., Chicago	1967
Nathaniel J. Kupferberg 3315 Milwaukee Ave., Chicago 60641	1969
Wayne N. Leimbach 987 Oak Ave., Aurora	1967
Donald G. Rumer 104 W. Clark St., Champaign 61820	1969

CONSULTANT:

E. W. Cannady
4601 State St., East St. Louis
Speaker, House of Delegates

STAFF: Frances C. Zimmer

*Responsibilities and Purposes Described in
Constitution and Bylaws*

COMMITTEE ON CONTINUING EDUCATION (Board of Trustees)

Robert J. Freeark, *Chairman*
Cook County Hospital,
1825 W. Harrison St., Chicago

Hubert L. Allen
426 Belleview Ave., Alton 62002
Washington University (Missouri)

George Block
950 E. 59th St., Chicago
University of Chicago

T. Howard Clarke
251 E. Chicago Ave., Chicago
Chicago Wesley Memorial Hospital

Leonard D. Grayson
1101 Maine St., Quincy 62301
Washington University (Missouri)

Edwin N. Irons
122 S. Michigan Ave., Chicago
Presbyterian-St. Luke's Hospital

Louis N. Katz
Cardiovascular Institute, Michael Reese
Hospital and Medical Center
Michael Reese Hospital

John L. Keeley
P.O. Box 1336, Hines
Stritch School of Medicine

Louis R. Limarzi
910 N. East Ave., Oak Park
University of Illinois

Edward S. Petersen
303 E. Chicago Ave.
Northwestern University

Gordon Sprague
Medical Center Clinic, Paris

William R. Thompson
1640 Dartmouth Ln., Deerfield

Leo Zimmerman
55 E. Washington St., Chicago
Chicago Medical School

CONSULTANT:

William E. Adams
950 E. 59th St., Chicago

STAFF: Albert G. Boeck

Responsibilities and Purposes

The committee shall provide a program of continuing education for the practicing physicians of Illinois. This shall include courses in specific medical subjects as requested by component societies as well as speakers on scientific subjects. The committee shall solicit individuals or teams from the medical schools in Illinois, the hospitals and research centers and the body of practitioners to present this program of continuing education. It shall study more effective means of presenting educational material throughout the state. It shall provide additional services to component societies as are deemed necessary to the conduct of an effective program.

COMMITTEE TO STUDY THE CONVENTION
(Board of Trustees)

George F. Lull, *Chairman*
400 E. Randolph St., Chicago

E. Chester Bone
800 W. State St., Jacksonville

H. Marchmont-Robinson
14 E. Jackson Blvd., Chicago

Norman E. Powers
3125 Prospect Rd., Peoria

CONSULTANT:

William M. Lees
7000 N. Kenton Ave., Lincolnwood

STAFF: Albert G. Boeck

Responsibilities and Purposes

This committee was appointed to make a five-year study of the ISMS Annual Convention; to re-

view and evaluate its scientific effectiveness; to study its pattern of relying on scientific sections for the major portion of the program; to judge its value to Illinois physicians; and to recommend to the Committee on Scientific Assembly any changes which would improve the convention.

COMMITTEE ON DISASTER MEDICAL CARE
(Bylaws)

Term
Expires

Max Klinghoffer, *Chairman*
127 E. Vallette St., Elmhurst 1967

Jack R. Baldwin
1315 S. Sixth St., Springfield 1968

Richard V. Lee
University Health Service, Carbondale 1969

Harold C. Lueth
636 Church St., Evanston 1967

Carl F. Steinhoff
720 N. Michigan Ave., Chicago 1969

AUXILIARY REPRESENTATION:

Mrs. Victor H. Beinke
2137 S. Lincoln, Springfield 62704

STAFF: James Slawny

*Responsibilities and Purposes Described in
Constitution and Bylaws*

MEDICAL SELF-HELP TRAINING SUBCOMMITTEE

Jack Baldwin, *Chairman*

Leonard F. Roblee
1000 State St., Lockport

George Saxl
111 W. Grand Ave., Bensenville

Franklin D. Yoder
State Office Bldg., Springfield

Edward N. Zinschlag
Link Clinic, Mattoon

SUBCOMMITTEE ON BLOOD AND BLOOD SUBSTITUTES

Harold C. Lueth, *Chairman*

James B. Hartney
410 Lake St., Oak Park

Leonard F. Roblee

COMMITTEE ON DRUG MANUAL
(Board of Trustees)

Robert C. Muehreke, *Chairman*
518 N. Austin Blvd., Oak Park

James A. Weatherly, *Vice Chairman*
108 N. 14th St., Murphysboro

Joseph Cece
Oak Brook Professional Bldg.
Oak Brook

Charles R. Frazer, Jr.
1401 Gaty St., East St. Louis 62201

Edsel K. Hudson
5054 S. Woodlawn Ave., Chicago

CONSULTANTS:

Theodore R. Sherrod, Ph.D., M.D.
901 S. Wolcott Ave., Chicago 60612

Louis Gdalan, R.Ph.
1753 W. Congress Pkwy., Chicago

STAFF: Walter R. Livingston

Responsibilities and Purposes

The committee will continue to work with the Illinois Department of Public Aid in an effort to keep the Drug Manual current and effective. When suggestions and comments from the members are submitted to the committee, it will review them and present them to the Department of Public Aid when necessary. The committee will also consider other drug matters affecting the policy of the medical society.

EDITORIAL BOARD (Board of Trustees)

Samuel A. Levinson, *Chairman*
3730 Lake Shore Dr., Chicago

Edwin F. Hirsch
5830 Stony Island Ave., Chicago

James H. Hutton
67 E. Madison St., Chicago

Julius Kowalski
436 Park Ave. East, Princeton

Harvey Kravitz
6420 N. California St., Chicago

Charles Mrazek
1210 Robinhood Ln., LaGrange Park

C. J. Mueller
108 W. 4th St., Sterling

Frederick Steigman
Hektoen Institute, 627 S. Wood St.,
Chicago 60612

E. Clinton Texter, Jr.
700 N. Michigan Ave., Chicago

Arkell Vaughn
7918 S. Paxton Ave., Chicago

CONSULTANT:

Jacob E. Reisch
1129 S. 2nd St., Springfield

STAFF: Albert G. Boeck

Responsibilities and Purposes

The responsibilities of this committee lie in the area of the editorial content of the Illinois Medical Journal. It shall make recommendations to the editor concerning the scientific content, regular features and subjects of special interest to the members. It shall serve as a review board for manuscripts which the editor believes require special medical evaluation. It shall assist the editor in any way possible to obtain and present medical manuscripts of the highest quality and maximum interest to the physicians of Illinois.

for August, 1966

EDUCATIONAL & SCIENTIFIC FOUNDATION (Board Members Only)

Burtis E. Montgomery, *Chairman*
37 S. Main St., Harrisburg
Immediate Past President

Arthur F. Goodyear
142 E. Prairie Ave., Decatur
Chairman of the Board

Caesar Portes
25 E. Washington St., Chicago
President

Jacob E. Reisch
1129 S. 2nd St., Springfield
Secretary-Treasurer

STAFF: Albert G. Boeck

Responsibilities and Purposes

The Educational & Scientific Foundation was founded to provide an administrative agency to foster the advancement of medical science through (1) the initiation of scientific and medical research activities, (2) the collection, evaluation and dissemination of the results of research activities to the public and (3) the implementation and management of projects related to medicine for individuals or organizations seeking to inform or educate others, or to improve their own knowledge. The charter of the foundation calls for a board of directors consisting of the following officers of the Illinois State Medical Society: Immediate Past President (as chairman), Chairman of the Board of Trustees, President, and Secretary-Treasurer.

COMMITTEE ON ENVIRONMENTAL HEALTH (Board of Trustees)

Edward Press, *Chairman*
160 N. LaSalle St., Chicago 60601

Robert J. Maganini
727 W. Hickory, Hinsdale

Clark W. Mangun, Jr.
840 N. Lake Shore Dr., Chicago

Howard C. Burkhead
130 Dempster St., Evanston 60201
Chairman, Committee on Radiation

James B. Hartney
410 Lake St., Oak Park
Chairman, Committee on Laboratory Evaluation

Edward C. Holmblad
1350 Lake Shore Dr., Chicago
Chairman, Committee on Occupational Health

Ralph H. Kunstadter
664 N. Michigan Ave., Chicago
Chairman, Committee on Child Health

Joseph H. Skom
707 N. Fairbanks Ct., Chicago
Chairman, Committee on Narcotics & Hazardous Substances

Franklin D. Yoder
503 State Office Bldg., Springfield
Director, Department of Public Health

STAFF: Albert G. Boeck

Responsibilities and Purposes

The committee is responsible for medicine's interest in the relationship of man to his surroundings, particularly those areas which pertain to the control of transmissible disease; air, water and soil pollution; health problems related to population growth; urbanization and technicological developments bearing on the ecology of man.

ETHICAL RELATIONS COMMITTEE (Board Members Only)

Willard C. Scrivner, *Chairman*
4601 State St., East St. Louis

J. Ernest Breed
55 E. Washington St., Chicago

William M. Lees
7000 N. Kenton Ave., Lincolnwood

Burtis E. Montgomery
37 S. Main St., Harrisburg

Mather Pfeifferberger
Piasa First Federal Bldg., State and
Wall Sts., Alton 62002

STAFF: James Slawny

Responsibilities and Purposes

The responsibilities of this committee include matters involving interpretations of the Principles of Medical Ethics, violations of the Constitution and Bylaws of the ISMS, and its component societies, and charges of misconduct against members of the Society. It shall serve as an appellate body to hear and review cases involving these matters arising from appeals made to the Board by members of the Society.

EXECUTIVE COMMITTEE (Board Members Only)

Arthur F. Goodyear, *Chairman*
142 E. Prairie Ave., Decatur
Chairman of the Board

Caesar Portes
25 E. Washington St., Chicago
President

Newton DuPuy
1101 Maine St., Quincy
President-Elect

Jacob E. Reisch
1129 S. 2nd St., Springfield
Secretary-Treasurer

Burtis E. Montgomery
37 S. Main St., Harrisburg
Trustee-at-Large

Philip G. Thomsen
13828 Lincoln Ave., Dolton
Chairman, Finance Committee

William E. Adams
950 E. 59th St., Chicago
Chairman, Policy Committee

EX-OFFICIO:

Edward W. Cannady
4601 State St., East St. Louis
Speaker of The House

STAFF: Robert L. Richards

COMMITTEE ON EYE HEALTH (Board of Trustees)

Peter C. Kronfeld, *Chairman*
1853 W. Polk St., Chicago

Walter Stevenson, *Vice Chairman*
1124 Broadway, Quincy

C. J. Black
172 Schiller, Elmhurst

T. William Cook
2300 Rockton Ave., Rockford

Burton Mark Krimmer
5736 W. North Ave., Chicago 60639

Daniel Snyderacker
111 N. Wabash Ave., Chicago

Manuel L. Stillerman
111 N. Wabash Ave., Chicago

M. Byron Weisbaum
520 E. Allen St., Springfield 62703

STAFF: Albert G. Boeck

Responsibilities and Purposes

The committee shall serve as a source of information on eye health matters for the ISMS. It shall evaluate available information and make recommendations to the Board for the position the ISMS should take on issues in this area, and cooperate with institutions and voluntary health agencies in disseminating information on eye health subjects to the profession and to the public. It shall be on the alert for misleading or fallacious programs and information which need correction for the protection of the public.

FINANCE COMMITTEE (Board Members Only)

Philip G. Thomsen, *Chairman*
13828 Lincoln Ave., Dolton 60419

Jacob E. Reisch, *Secretary-Treasurer*
1129 S. Second St., Springfield

Carl E. Clark
225 Edward St., Sycamore 60178

Ralph N. Redmond
101 E. Miller Rd., Sterling 61081

STAFF: Robert L. Richards

FIFTY YEAR CLUB COMMITTEE (Board of Trustees)

George F. Lull, *Chairman*
400 E. Randolph St., Chicago

G. C. Otrich
110 N. High St., Belleville

Walter H. Theobald
307 N. Michigan Ave., Chicago

STAFF: James Slawny

Responsibilities and Purposes

This committee shall administer the activities of the "club," composed of physicians who have practiced medicine for 50 years or more. The committee makes arrangements for the annual complimentary luncheon held during the annual convention, honoring members of the club.

GRIEVANCE COMMITTEE

(Bylaws)

	Term Expires
William H. Walton, <i>Chairman</i> 109 S. High St., Belleville	1968
A. K. Baldwin 229 Fifth St., Carrollton	1967
Allison L. Burdick, Sr. 5906 W. North Ave., Chicago	1968
Frank H. Fowler 6356 W. Diversey Ave., Chicago 60639	1969
Victor V. Rockey 324 W. Galena Ave., Freeport	1969
Arkell M. Vaughn 2015 E. 79th St., Chicago	1967
STAFF: James Slawny	

Responsibilities and Purposes Described in Constitution and Bylaws

LIAISON COMMITTEE WITH HEALTH INSURANCE INDUSTRY AND BLUE CROSS-BLUE SHIELD

(Board of Trustees)

Norris L. Brookens, *Chairman*
602 W. University, Urbana

Robert G. England
224 E. Main St., Carlinville 62626

Robert E. Fitzgerald
542 Duane, Glen Ellyn

Dean G. Peterson
204 N. Locust, Pontiac 61764

Joseph C. Sodaro
7318 W. Madison St., Forest Park 60130

Paul Van Pernis
1316 Charles St., Rockford 61107

Theodore Wachowski
310 Ellis Ave., Wheaton 60187

STAFF: Walter R. Livingston

Responsibilities and Purposes

The function of the committee is to provide a channel of communication between the health insurance industry, Blue Cross-Blue Shield Plans, and the Illinois State Medical Society on matters of mutual concern. Specific problems which may arise as a result of this liaison will be referred to appropriate committees for detailed study.

for August, 1966

MEDICAL ADVISORY COMMITTEE TO THE HEALTH CAREERS COUNCIL OF ILLINOIS (Board of Trustees)

Allison L. Burdick, Jr., *Chairman*
1637 North Mobile Ave., Chicago

Jack L. Gibbs
24 Main St., Canton

John B. Hall
1425 S. Racine Ave., Chicago 60608

Samuel B. Nelson
3131 N. Lincoln, Chicago 60657

Joseph C. Sodaro
7318 W. Madison St., Forest Park 60130

CONSULTANT:

Maynard I. Shapiro
7531 Stony Island Ave., Chicago 60649

STAFF: James Slawny

Responsibilities and Purposes

This committee is responsible for advising the Health Careers Council of Illinois on all matters regarding careers in medicine. It shall also advise and assist the council in the development of new financial resources needed to maintain its operation. The chairman of this committee shall be the designated representative to HCCI and shall report to the Board of Trustees.

COMMITTEE ON HOSPITAL RELATIONS

(Board of Trustees)

N. A. Thompson, *Chairman*
1201 Pine St., Eldorado

J. W. Buser, *Vice Chairman*
4601 State St., East St. Louis

John A. Bowman
300 N. Main St., Abingdon

John M. Dorsey
2650 Ridge Ave., Evanston

Harlan English
909 N. Logan Ave., Danville

Donald A. Meier
555 S. Schuyler, Ave., Kankakee 60901

Gerald S. Modjeska
310 S. Michigan Ave., Chicago 60604

Kenneth John Smith
2320 High St., Blue Island

CONSULTANT:
Noel G. Shaw
2901 Central St., Evanston

STAFF: Walter R. Livingston

Responsibilities and Purposes

Among the functions of the committee are the consideration of all problems bearing on the relationship between physicians and hospitals except those pertaining to medical training. A prime objective of the committee is to encourage hospital staffs to become actively interested in the economics of hospital operation and hospital services. In

areas of health insurance, nursing and items requiring legislative action, the committee should coordinate its activities with the respective committees of the Society to avoid duplication of effort.

The committee will continue to work toward solving mutual problems pertaining to hospital utilization; medical, nursing and administrative care of patients; hospital costs; accreditation of non-accredited hospitals; and to improve physician-hospital relationships in the interest of patient care.

ILLINOIS ASSOCIATION OF PROFESSIONS COMMITTEE

(Board of Trustees)

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4 S. Genesee St., Waukegan

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6060 S. Drexel Ave., Chicago

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30 N. Michigan Ave., Chicago

Eugene M. Narsete
145 S. Northwest Hwy., Park Ridge

Edward A. Piszczek
6410 N. Leona Ave., Chicago

Vincent C. Sarley
811 W. Wellington Ave., Chicago

Raymond Schale
70 Meadowview Ctr., Kankakee 60901

STAFF: Robert L. Richards

Responsibilities and Purposes

The responsibilities of this committee have been established by the Board of Trustees as follows: "Maintain general liaison with the officers and members of other professions . . . formally associate themselves into a body to represent the broad professions within the state . . . conduct programs and activities which will enhance the relationships among the professions."

A further responsibility of this committee is to have a subcommittee serve in liaison with the Interprofessional Council: "The purpose of the subcommittee is to meet monthly with the Interprofessional Council, provide to them that information which is deemed important for an understanding between the groups represented on the Council, to co-operate with the Interprofessional Council on their Distinguished Service Award, and other programs of mutual interest."

SUBCOMMITTEE—TO PROVIDE LIAISON WITH INTERPROFESSIONAL COUNCIL

Andrew J. Brislen, *Chairman*
6060 S. Drexel Ave., Chicago

Lawrence J. Bowness
9135 S. Exchange Ave., Chicago

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30 N. Michigan Ave., Chicago

Walter J. Reedy
814 Washington St., Waukegan

David Whitsell
1832 E. 87th St., Chicago

STAFF: Robert L. Richards

LIAISON COMMITTEE TO ILLINOIS OSTEOPATHIC ASSOCIATION

(Board of Trustees)

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Harlan English
909 N. Logan Ave., Danville

Frank H. Fowler
6356 Diversey, Chicago 60639

Edwin S. Hamilton
187 S. Schuyler, Kankakee

STAFF: John W. Neal

Responsibilities and Purposes

The responsibilities of this committee are to assist in developing rapport, cooperation with and understanding of the osteopathic profession. It shall function when requested to do so either by (1) The American Medical Association; (2) The Illinois State Medical Society; (3) The Illinois Osteopathic Association.

Its findings in any specific instance shall be reported to either the Board of Trustees or the House of Delegates for consideration and action.

COMMITTEE ON IMPARTIAL MEDICAL TESTIMONY

(Bylaws)

	Term Expires
Clinton L. Compere, <i>Chairman</i> 737 N. Michigan Ave., Chicago	1967
R. Gregory Green 1355 Charles St., Rockford	1967
Roger A. Harvey Department of Radiology, University of Illinois, Box 6998, Chicago 60680	1969
Samuel A. Levinson 3730 Lake Shore Dr., Chicago	1967
Jerome J. McCullough 110 N. High St., Belleville	1968
Maurice D. Murfin 250 N. Water St., Decatur	1969
Harry D. Nesmith RFD No. 1, Salem	1969
Vincent C. Sarley 811 W. Wellington Ave., Chicago	1968
Leo P. A. Sweeney 2658 W. 95th St., Evergreen Park	1968
STAFF: Paul S. Swarts	

Responsibilities and Purposes Described in Constitution and Bylaws

JOURNAL COMMITTEE

(Board Members Only)

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1129 S. 2nd St., Springfield

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Frank J. Jirka, Jr.
1507 Keystone Ave., River Forest

William M. Lees
7000 N. Kenton Ave., Lincolnwood

Darrell H. Trumpe
St. John's Sanatorium, Springfield

STAFF: Albert G. Boeck

Responsibilities and Purposes

This committee shall be responsible for the production of the *Illinois Medical Journal*. It shall recommend to the Board of Trustees all policies governing the editorial, business and production aspects of the Journal. It shall supervise the editor in the selection and preparation of all copy and it shall establish standards for the editorial content. It shall establish advertising policies, rates, standards and review all new accounts prior to acceptance, and approve reprint and circulation policies. It shall conduct a periodic review of the printer's contract and solicit bids as indicated. It shall establish the format, cover, type faces and general layout of the Journal.

COMMITTEE ON LABORATORY EVALUATION

(Bylaws)

	Term Expires
James B. Hartney, <i>Chairman</i> 410 Lake St., Oak Park	1967
Thomas P. deGraffenried Deval Shopping Center, DeKalb	1967
Grover L. Seitzinger 812 N. Logan Ave., Danville 61832	1969
Jack Williams Prudential Plaza, Chicago 60601	1969
Hans Willuhn 1335 Charles St., Rockford	1968

STAFF: Paul S. Swarts

*Responsibilities and Purposes Described in
Constitution and Bylaws*

COMMITTEE ON LEGISLATION

(Bylaws)

	Term Expires
V. P. Siegel, <i>Chairman</i> 4601 State St., East St. Louis	1968
George B. Callahan 4 S. Genesee St., Waukegan	1967
H. Close Hesseltine 5807 S. Dorchester Ave., Chicago	1969
C. J. Jannings, III 101 E. Center St., Fairfield	1969
Harold A. Sofield 715 Lake St., Oak Park	1968

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AUXILIARY REPRESENTATION:

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5830 Stony Island Ave., Chicago

Mrs. Alan Taylor
1607 N. Vermilion, Danville 61833

STAFF: Roger N. White

Paul S. Swarts

*Responsibilities and Purposes Described in
Constitution and Bylaws*

LEGISLATIVE STUDY SUB-COMMITTEE

PERSONNEL TO BE ASSIGNED AS NEEDED

John Adams
303 E. Superior St., Chicago

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Christie Clinic, Champaign

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172 Schiller, Elmhurst

Hugh T. Carmichael
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Charles Culmer
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511 E. Hawley St., Mundelein
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213 S. 17th St., Mattoon 60901
Henry Thompson
307 E. Jefferson, Effingham
Chester B. Thrift
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Italics indicate alternates

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711 N. McKinley Rd., Lake Forest 60045

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George E. Giffin
203 Park Ave., Princeton 61536

3. Melvin Goodman
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1700 W. 87th St., Chicago

4. V. B. Adams
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Ralph Gibson
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15 N. Walnut, Pinckneyville 62274
11. John J. McLaughlin
1000 W. Jefferson St., Joliet
Charles H. P. Westfall
172 Schiller St., Elmhurst

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Department of Public Health, Springfield
W. C. Scrivner
4601 State St., East St. Louis
Augusta Webster
707 Fairbanks Ct., Chicago 60611
Franklin D. Yoder
Department of Public Health, Springfield

STAFF: Albert G. Boeck

Responsibilities and Purposes

The committee shall cooperate with the State Department of Public Health in reducing the maternal mortality rate in Illinois. As a means of achieving this goal, it shall review all maternal deaths reported and send its evaluation of the management of the case to the attending physician. In similar fashion, it shall cooperate with the Joint Committee to Study Perinatal Mortality to achieve its objectives. Appropriate measures should be taken to share the results of this research with those practitioners in a position to apply it for the benefit of their patients.

ADVISORY COMMITTEE TO MEDICAL ASSISTANTS ASSOCIATION

(Board of Trustees)

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7531 Stony Island Ave., Chicago 60649

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George Dohrman
3000 Logan Blvd., Chicago 60647

Earl W. Donelan
1728 S. Seventh St., Springfield 62703

Clarence G. Glenn
152 N. Edward St., Decatur

Thomas R. Harwood
Northwest Community Hospital, 800 W. Central Rd., Arlington Heights 60005

H. H. Pillinger, Jr.
1100 Larkin Ave., Elgin

Waldo C. Schneider
1221 E. State St., Rockford 61108

Fred L. Stuttle
1200 Hamilton Rd., Peoria

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2311 E. Oakland Ave., Bloomington

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225 Edward St., Sycamore

Caesar Portes
25 E. Washington St., Chicago

Philip G. Thomsen
13826 Lincoln, Dolton

STAFF:

James Slawny

Responsibilities and Purposes

The committee shall be responsible to the Board for maintaining effective liaison between the Society and the Illinois Medical Assistants Association; it shall cooperate with county medical societies in the establishment of medical assistants associations; and shall, upon request, advise the Medical Assistants Association with respect to programs. The committee shall counsel with the officers and committees of the Medical Assistants Association and serve to maintain channels of communication between the two organizations at all times.

COMMITTEE ON MEDICAL ECONOMICS

(Board of Trustees)

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700 N. Seventh St., Springfield

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723 N. Second St., Chillicothe

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RFD 6, Olney

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Joseph B. Moles
1011 Lake St., Oak Park

Robert E. Schettler
950 E. Market St., Red Bud

R. Glenn Smith
1221 E. State St., Rockford

CONSULTANT:
Clifton L. Reeder
310 S. Michigan Ave., Chicago 60604

STAFF: Walter R. Livingston

Responsibilities and Purposes

The functions of the Committee on Medical Economics shall include its continuing review of the Tax Qualified Investment Program (Keogh); the Retirement Investment Program; the Group Disability Program, and the Group Major Medical Program. The Committee shall continue to investigate various insurance programs that may serve to benefit members of the Society.

The Committee shall continue to assist in the administration of the presently sponsored disability program by performing the adjudication services provided for in the master contract.

Matters having an economic bearing on the practice of medicine, including fact-finding and research studies in the general field of medical economics, shall be brought before this committee for consideration.

COMMITTEE ON MEDICAL EDUCATION

(Bylaws)

	Term Expires
Daniel Ruge, <i>Chairman</i> 700 N. Michigan Ave., Chicago	1969
Herschel Browns 4600 N. Ravenswood Ave., Chicago 60640	1968
Donald H. Dexter Macomb Clinic, Doctors Ln., Macomb	1967
Leonard D. Grayson 1101 Maine St., Quincy	1969
Clifton L. Reeder 310 S. Michigan Ave., Chicago	1967
CONSULTANT:	
James A. Weatherly 108 N. 14th St., Murphysboro 62966	
STAFF: Albert G. Boeck	

*Responsibilities and Purposes Described in
Constitution and Bylaws*

AD HOC COMMITTEE ON SPECIAL PROBLEMS OF MEDICAL EDUCATION (Board of Trustees)

Daniel Ruge, *Chairman*
700 N. Michigan Ave., Chicago

E. Chester Bone
800 W. State St., Jacksonville 62650

Herschel Browns
4600 N. Ravenswood Ave., Chicago 60640

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Macomb Clinic, Macomb 61455

Jack L. Gibbs
24 Main St., Canton

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C. J. Jannings
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Kenneth F. Kessel
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Morgan M. Meyer
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310 S. Michigan Ave., Chicago 60604

A. L. Robinson
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Robert Schafer
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Howard Schneider
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Carl Weissmann
1508 Seventh St., Moline 61265

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723 N. Second St., Chillicothe 61523

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1507 Keystone Ave., River Forest 60305

Philip Thomsen
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Representatives of Medical Schools

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Michael Reese Hospital and Medical Center,
2900 S. Ellis Ave., Chicago 60616

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Stritch School of Medicine, Loyola University

William Barrett Rich
706 S. Wolcott Ave., Chicago 60612

University of Chicago

Robert G. Page
950 E. 59th St., Chicago 60637

University of Illinois

Melvin Sabshin
P. O. Box 6998, Chicago 60680

MEDICAL-LEGAL COMMITTEE

(Bylaws)

	Term Expires
Luis V. Amador, <i>Chairman</i> 700 N. Michigan Ave., Chicago	1968
Joseph Ankenbrandt 462 W. William St., Decatur	1968
Clinton L. Compere 737 N. Michigan Ave., Chicago	1967
John G. Meyer, Jr. 413 W. Monroe St., Springfield	1969
George C. Turner 6627 Ponchartrain, Chicago	1969
STAFF: Paul S. Swarts	

*Responsibilities and Purposes Described in
Constitution and Bylaws*

MEMBERSHIP COMMITTEE

(Board of Trustees)

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6 N. Michigan Ave., Chicago

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Galesburg State Research Hospital, Galesburg

Roger Hoekstra
1530 N. Main, Wheaton

Fritz Koenig
Catlin

Clarence Norberg
2305 White Oak Dr., Northbrook 60062

H. D. Scott, Jr.
800 W. State St., Jacksonville

STAFF: Roland I. King

Responsibilities and Purposes

The responsibilities of this committee have been established by the Board of Trustees as follows: "to aid in any way possible all county medical societies in screening and developing membership for all ethical non-members in the various county areas. No work should be done in any county medical society without a request from the officers thereof."

COMMITTEE ON MENTAL HEALTH

(Board of Trustees)

John R. Adams, *Chairman*
707 N. Fairbanks Ct., Chicago 60611

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827 First National Bank Bldg., Peoria

E. Eliot Benezra
103 Haven Rd., Elmhurst 60127

Louis D. Boshes
30 N. Michigan Ave., Chicago

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135 S. Sacramento, Sycamore

Richard J. Graff
100 Barnard Rd., Manteno

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8601 W. Main, Belleville
Robert A. Moore
Swedish-American Hospital, Rockford 61101
Walter P. Plassman
Box 552, Centralia 62801
Albert Rauh
725 S. Second St., Springfield
F. L. Sullivan
3 W. Stephenson St., Freeport

CONSULTANT:
Harold M. Visotsky
160 N. LaSalle St., Chicago

AUXILIARY REPRESENTATION:
Mrs. Thomas Tourlentes
Research Hospital, Galesburg 61401

STAFF: Albert G. Boeck

Responsibilities and Purposes

The responsibilities of this committee are as follows: It shall serve as a source of information on mental health matters for the ISMS. It shall evaluate available information and make recommendations to the Board of Trustees for the position the ISMS should take on issues in this area. It shall also cooperate with institutions and voluntary health agencies in disseminating information on mental health subjects to the profession and the public. It shall be on the alert for misleading or fallacious programs and information which need correcting for the protection of the public.

COMMITTEE ON NARCOTICS AND HAZARDOUS SUBSTANCES (Board of Trustees)

Joseph S. Skom, *Chairman*
707 N. Fairbanks Ct., Chicago 60611
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1836 W. 87th St., Chicago
Kermit Mehlinger
4901 S. Drexel Blvd., Chicago
R. K. Richards
1534 Alexander Ct., Waukegan
Jordan M. Seher
300 N. State St., Chicago
Ross Schlich
Memorial Hospital, Springfield
George S. Schwerin
7531 Stony Island Ave., Chicago
David M. Slight
25 E. Washington St., Chicago
STAFF: Paul S. Swarts

Responsibilities and Purposes

The functions of this committee are: (1) study, research and dissemination of educational information on narcotics and hazardous substances to members of the medical profession;
(2) to recommend acceptable measures for the control of distribution, the use and disposal of nar-

cotics and hazardous substances, exclusive of radiation products but including poison control;
(3) to cooperate with official and non-official agencies in all matters pertaining to this subject.

COMMITTEE ON NURSING (Board of Trustees)

W. I. Taylor, *Chairman*
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112 S. Northwest Hwy., Park Ridge
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67 E. Madison St., Chicago
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Eastern Illinois University, Charleston 61920
Henrietta Herbolsheimer
950 E. 59th St., Chicago 60637
H. J. Kolb
St. Joseph
Nicholas P. Primiano
108 Scott St., Joliet

CONSULTANTS:
Ted LeBoy
330 Gale Ave., River Forest
W. C. Scrivner
4601 State St., East St. Louis

STAFF: Albert G. Boeck

Responsibilities and Purposes

The major objective of this committee is to establish a close professional relationship between the medical and nursing professions for the improvement of the health care of the patient. It should work with representatives of the nursing organizations to obtain sound educational programs for nurses, to improve the working relationships of the doctor and nurse in the hospital, and to help establish work patterns for nurses in the hospital which utilize the full skill of the nurse for the care of the patient. The committee should also assist in programs to recruit more graduate nurses, registered nurses, practical nurses, nurses aids and other ancillary nursing personnel.

COMMITTEE ON NUTRITION (Board of Trustees)

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620 N. Main St., Carrollton
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229 E. Glen Ave., Peoria
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1425 S. Racine Ave., Chicago
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800 W. State, Jacksonville

CONSULTANTS:
James R. Wilson
P.O. Box 70, Winnetka 60093
Paul R. Cannon
R.F.D. 2, Box 56, Yorkville

STAFF: Albert G. Boeck

Responsibilities and Purposes

The Committee shall serve as a source of information on nutrition matters for the ISMS and evaluate available information and make recommendations to the Board of Trustees for the position the ISMS should take on issues in this area. It shall cooperate with institutions and voluntary health agencies in disseminating information on nutrition subjects to the profession and to the public. It shall be on the alert for misleading or fallacious programs and information which need correction for the protection of the public.

COMMITTEE ON OCCUPATIONAL HEALTH (Bylaws)

	Term Expires
Edward C. Holmblad, <i>Chairman</i> 1350 N. Lake Shore Dr., Chicago	1967
Charles Asbury 5728 N. Woodlawn Ct., Peoria	1969
George H. Irwin 1791 W. Howard St., Chicago	1969
Arthur E. Sulek Health Department, City Hall, Rockford 61104	1967
Chester R. Zeiss 208 S. LaSalle St., Chicago	1968
STAFF: Paul S. Swarts	

*Responsibilities and Purposes Described in
Constitution and Bylaws*

JOINT COMMITTEE ON PERINATAL MORTALITY (Board of Trustees)

Representing:

Child Health Committee

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602 West University Ave., Urbana
Walter G. Steiner
140 W. Sale St., Tuscola

Maternal Welfare Committee

William W. Curtis, *Co-Chairman*
100 W. Miller Rd., Springfield 62072
Robert R. Hartman
1515A W. Walnut St., Jacksonville 62650
Harry L. Lewis
104 S. Maple St., Benton

Illinois Society of Obstetrics and Gynecology

Paul A. Dailey
620 N. Main St., Carrollton

Illinois Chapter, American Academy of Pediatrics

Eugene Slotkowski
5330 W. Devon Ave., Chicago

Illinois Chapter, Academy of General Practice

Simon Y. Saltman
7531 Stony Island Ave., Chicago

Illinois Department of Public Health

Donaldson F. Rawlings
500 State Office Bldg., Springfield
John H. Rendok
500 State Office Bldg., Springfield

Illinois Hospital Association

John A. Taft, Jr.

Administrator, Delnor Hospital,
975 N. 5th Ave., St. Charles 60174

Illinois Nursing Society

Velma Foresman, R.N.
1900 W. Polk St., Chicago

STAFF: Albert G. Boeck

Responsibilities and Purposes

This committee shall seek to establish a method of obtaining pertinent information on all perinatal mortality cases in Illinois; to evaluate these cases and propose a program for the reduction of perinatal deaths; to conduct an educational campaign among physicians to implement this program and to recommend such educational programs among lay groups as will contribute to the reduction of the incidence of perinatal mortality cases.

POLICY COMMITTEE (Board Members Only)

William E. Adams, *Chairman*
950 E. 59th St., Chicago 60637
Frank J. Jirka, Jr.
1507 Keystone Ave., River Forest 60305
Paul P. Youngberg
1520 Seventh Ave., Moline 61265
STAFF: Frances C. Zimmer

COMMITTEE ON PREPAYMENT PLANS AND ORGANIZATION (Bylaws)

	Term Expires
Philip C. Lynch, <i>Chairman</i> 1314 N. Main St., Decatur	1969
Maurice M. Hoeltgen 1836 W. 87th St., Chicago	1967
Michael R. Saxon 143 S. Lincoln, Aurora 60505	1967
H. Kenneth Seatliff 1415 Greenleaf Ave., Chicago	1969
E. Lee Strohl 122 S. Michigan Ave., Chicago	1968
CONSULTANT:	
Ted LeBoy 330 Gale Ave., River Forest 60305	
STAFF: Walter R. Livingston	

*Responsibilities and Purposes Described in
Constitution and Bylaws*

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Herschel Browns
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Donald E. Clark
Memorial Hospital, Springfield

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W. Robert Maloney
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1230 Scott St., Joliet

Peter Rumore
401 N. Mulberry St., Effingham 62401

Stanley Ruzich
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John L. Savage
723 Elm St., Winnetka

Julius P. Schweitzer
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103 Haven, Elmhurst

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840 Jefferson Bldg., Peoria

CONSULTANTS:

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Frank J. Jirka, Jr.
1507 Keystone Ave., River Forest

Ted LeBoy
330 Gale Avenue, River Forest

Philip G. Thomsen
13826 Lincoln Ave., Dolton

AUXILIARY REPRESENTATION:

Mrs. Alan Taylor
1607 N. Vermilion, Danville 61833

STAFF: James Brady

Responsibilities and Purposes

The Public Affairs Committee is concerned with the political process as it pertains to medicine and public health. Within this broad context, appropri-

ate education of the public is basic to continue health improvement in a free society. The electorate must make its wishes known to public officials.

The Public Affairs Committee shall strive to generate interest in the overall field of politics to enable the physician to participate effectively. Programs of public affairs orientation, political education, and campaign characteristics will be undertaken to increase the effectiveness of the physician in public affairs.

MEDICAL ADVISORY COMMITTEE TO THE ILLINOIS DEPARTMENT OF PUBLIC AID (Board of Trustees)

Fred A. Tworoger, *Chairman*
9130 N. Kedvale Ave., Skokie 60077

Rex O. McMorris, *Vice Chairman*
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Charles E. Baldree, Jr.
26 E. Washington St., Belleville

Robert F. Bettasso
313 W. Madison St., Ottawa

James R. Cooper
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Heinz Otto E. Hoffmann
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Chauncey C. Maher, Jr.
709 Myers Bldg., Springfield

George T. Mitchell
116 S. 5th St., Marshall

L. C. Nesbitt
6306 S. Cottage Grove, Chicago

Frank B. Norbury
1515 W. Walnut St., Jacksonville

Alphonse L. Robinson
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William Scanlon
654—1st St., LaSalle

Frank P. Skaggs
11 E. Poplar St., Harrisburg

John H. Steinkamp
824 Van Buren St., Belvidere

R. Kent Swedlund
112 N. Fourth St., Watseka

CONSULTANTS: (to serve on call of the chairman)

Edwin S. Hamilton
151 N. Schuyler St., Kankakee

George F. Lull
400 E. Randolph St., Chicago

Burtis E. Montgomery
37 S. Main St., Harrisburg

Robert C. Muehreke
518 N. Austin Blvd., Oak Park

STAFF: Walter R. Livingston

Responsibilities and Purposes

The Medical Advisory Committee meets at regular intervals with the staff of the Illinois Department of Public Aid to perform functions necessary to the operation of the medical program under public aid. The committee renders advisory decisions on matters

of medical policy in the administration of the quality, quantity, and cost standards of the various public aid programs. The committee operates in conjunction with an established system of county medical advisory committees and serves as a final reviewing body. It provides a channel of communication between physicians and the Department of Public Aid and strives to foster mutual understanding and good relationships.

The committee's functions also include a continuing program of education of physicians to familiarize them with the administrative details of public aid programs.

SUB-COMMITTEE ON ANESTHESIOLOGY

James A. Felts, *Chairman*
517 Bainbridge Rd., Marion
Max S. Sadove
840 S. Wood St., Chicago
Arthur T. Shima
532 N. Oak Park Ave., Oak Park
C. H. Walton
602 W. University Ave., Urbana

SUB-COMMITTEE ON CARDIOVASCULAR DISEASE

Robert Page, *Chairman*
950 E. 59th St., Chicago
William S. Dye
1725 W. Harrison St., Chicago
Peter V. Moulder
950 E. 59th St., Chicago

SUB-COMMITTEE ON OPHTHALMOLOGY

Leo P. A. Sweeney, *Chairman*
2658 W. 95th St., Evergreen Park
Max Hirschfelder
408 W. 2nd, Centralia 62801
Derrick Vail
700 N. Michigan Ave., Chicago

SUB-COMMITTEE ON RADIOLOGY

John H. Gilmore, *Chairman*
518 N. Austin Blvd., Oak Park 60302
Fred H. Decker
221 N.E. Glen Oak Ave., Peoria
George E. Irwin, Jr.
703 N. East St., Bloomington
Wilson Scott
Carbondale Clinic, Carbondale 62901
L. S. Tichy
5401 Cornell Ave., Chicago
STAFF: Walter R. Livingston

Responsibilities and Purposes

The sub-committees function under the aegis of the Medical Advisory Committee in rendering specialized advice to the staff of the Illinois Department of Public Aid. Consultation from individual members is generally sought by telephone or letter regarding services to specific patients. All matters affecting changes in policy should be coordinated with the Medical Advisory Committee.

COMMITTEE ON PUBLIC RELATIONS

(Bylaws)

Term
Expires

Leo P. A. Sweeney, <i>Chairman</i>	
2658 W. 95th St., Evergreen Park	1967
Andrew J. Brislen	
6060 Drexel Blvd., Chicago	1968
Matthew B. Eisele	
4601 State St., East St. Louis	1967
Charles J. Weigel	
7579 Lake St., River Forest 60305	1969
Lee F. Winkler	
850 S. 4th Ave., Springfield	1968

CONSULTANT:

Jacob E. Reisch
1129 S. 2nd St., Springfield

STAFF: James Slawny

Responsibilities and Purposes Described in Constitution and Bylaws

RADIO-TELEVISION SUB-COMMITTEE

Leo P. A. Sweeney, *Chairman*
Max Klinghoffer
127 E. Vallette, Elmhurst
Bertram B. Moss
5360 N. Lincoln, Chicago

SUB-COMMITTEE ON VOLUNTARY HEALTH AGENCIES

Andrew J. Brislen, *Chairman*
Matthew B. Eisele
Edward A. Piszezsek
6410 Leona Ave., Chicago

SUB-COMMITTEE ON COMMUNITY HEALTH WEEK

Matthew B. Eisele, *Chairman*
Andrew J. Brislen
Edward A. Piszezsek

SUB-COMMITTEE ON NEWSPAPERS

Charles J. Weigel, *Chairman*
Donald Miller
6626 N. Sauganash Ave., Lincolnwood

SUB-COMMITTEE ON SPECIAL PROMOTIONS

Lee Winkler, *Chairman*
Jacob Reisch

COMMITTEE ON PUBLIC SAFETY

(Bylaws)

Term
Expires

Julius M. Kowalski, <i>Chairman</i>	
436 Park Ave. East, Princeton	1967
Clarence E. Cawvey	
206 N. Main St., Pinckneyville	1968
George H. Irwin	
1791 Howard St., Chicago	1967
Edwin A. Lee	
510 S. 13th St., Springfield	1969
Norman J. Rose	
500 State Office Bldg., Springfield	1968
Clifford P. Sullivan	
8000 S. Racine Ave., Chicago	1969

AUXILIARY REPRESENTATION :

Mrs. Ralph Redmond
Rt. 1, River Rd., Sterling

STAFF: James Slawny

Responsibilities and Purposes Described in Constitution and Bylaws

SUB-COMMITTEE ON TRAUMA

George H. Irwin, *Chairman*
James J. Callahan
4849 Fullerton Ave., Chicago
James P. Campbell
322 N. Blanchard St., Wheaton
Dominic T. Chechile
2449 N. Cicero Ave., Chicago

SUB-COMMITTEE ON PEDIATRIC HAZARDS

Clifford P. Sullivan, *Chairman*
Norman J. Rose

SUB-COMMITTEE ON PUBLIC HEALTH

Edwin A. Lee, *Chairman*
Franklin D. Yoder
503 State Office Bldg., Springfield
Edward Press
Room 1827, 160 N. LaSalle St., Chicago

COMMITTEE ON QUACKERY (Board of Trustees)

Edward A. Piszczek, *Chairman*
6410 N. Leona Ave., Chicago
Robert R. Bates
250 N. Ottawa St., Joliet
Casper Epsteen
25 E. Washington St., Chicago 60602
Herbert V. Fine
110 N. Division, Carterville 62918
Charles W. Pfister
5511 N. Harlem Ave., Chicago 60656
John S. Kapernick
142 E. Prairie Ave., Decatur 62523
Donald A. Meier
555 Schuyler, Kankakee
Mladen Mijanovich
556 E. Grant, Marengo 60152
Raymond B. Murphy
RFD 3, Box 19, Robinson 62454
William B. Rich
221 Wesley Ave., Oak Park 60302
Simon Y. Saltman
7531 Stony Island Ave., Chicago 60649
T. R. Van Dellen
Tribune Tower, 435 N. Michigan Ave., Chicago
Wilson H. West
Murphy Bldg., East St. Louis 62201
Walter Wood
614 W. Maple St., Hinsdale 60521
STAFF: Paul S. Swarts

Responsibilities and Purposes

The Committee on Quackery shall concern itself with the illegal practice of medicine and other healing arts groups associated with unfounded claims for cure of disease. It shall cooperate with the legal authorities of the State, such as the office of the Attorney General, in providing information and witnesses for the prosecution of violators of the law. It shall cooperate with the American Medical Association's Department of Investigation, and other agencies interested in this field.

COMMITTEE ON RADIATION (Board of Trustees)

Howard C. Burkhead, *Chairman*
130 Dempster St., Evanston 60201
Abram H. Cannon
194 Michael John Dr., Park Ridge
Stephen L. Casper
1101 Maine St., Quincy
Robert W. Donnelly
812 N. Logan Ave., Danville
James H. Geist
12 Old Orchard, Kankakee 60901
John R. Hartman
120 N. Oak St., Hinsdale
Stuart P. Lippert
7 Pitner Pl., Jacksonville
James J. Nickson
Michael Reese Hospital, 29th St. and
Ellis Ave., Chicago 60616
Hyman R. Osheroff
420 S. Harlem, Freeport
Norman R. Shippey
4601 State St., East St. Louis 62205
Raymond B. White
9333 S. Damen Ave., Chicago
CONSULTANTS:
J. Ernest Breed
55 E. Washington St., Chicago
Carl E. Clark
225 Edward St., Sycamore
Robert S. Landauer, Ph.D.
1360 N. Lake Shore Dr., Chicago 60610
STAFF: Albert G. Boeck

Responsibilities and Purposes

The committee shall serve as a source of information on radiation matters for ISMS and evaluate available information and make recommendations to the Board for the position ISMS should take on issues in this area. It shall cooperate with institutions and voluntary health agencies in disseminating information on radiation subjects to the profession and to the public. It shall be on the alert for misleading or fallacious programs and information which need correcting for the protection of the public.

COMMITTEE ON REHABILITATION SERVICES

(Board of Trustees)

Edward L. Compere, *Chairman*
737 N. Michigan Ave., Chicago 60611

Henry B. Betts
401 E. Ohio St., Chicago 60611

Brian Huneke
443 Duane, Glen Ellyn 60137

Joseph L. Koczur
9145 S. Ashland Ave., Chicago 60620

Joseph A. Petrazio
18 N. 11th St., Murphysboro

Arthur Rodriguez
9145 S. Ashland Ave., Chicago 60620

Howard W. Schneider
238 W. 154th St., Harvey

CONSULTANTS:

Frank J. Jirka, Jr.
1507 Keystone Ave., River Forest

Reuben R. Wasserman
820 S. Damen Ave., Chicago

STAFF: Walter R. Livingston

Responsibilities and Purposes

The purposes of the Committee on Rehabilitation Services are to provide liaison between the Illinois State Medical Society and the Division of Vocational Rehabilitation, the Department of Public Aid, and other official or non-official agencies which purchase rehabilitation care for patients. The committee also works closely with the Governor's Committee on Employment of the Handicapped when called upon for its advice and counsel.

The committee shall render assistance to public and private agencies in the establishment of policies regarding rehabilitation facilities to be used and selection of patients for these services; encourage the training of rehabilitation personnel, thereby promulgating high quality care; and assist when possible to see that adequate medically supervised rehabilitation services be made available in all hospitals, according to the need of the hospital.

COMMITTEE ON RELATIVE VALUE

(Board of Trustees)

C. Elliott Bell, *Chairman*
250 N. Water St., Decatur 62522

John F. Eggers
111 W. Elm St., Sycamore

Casper Epstein
25 E. Washington St., Chicago

R. Gregory Green
1355 Charles St., Rockford

Gershon K. Greening
701 N. Walnut St., Springfield

Joseph G. Gustafson
1508 Seventh Street, Moline

Max S. Sadove
840 S. Wood St., Chicago

Grover L. Seitzinger
812 N. Logan Ave., Danville
STAFF: Walter R. Livingston

Responsibilities and Purposes

The functions of this committee shall include the responsibility for professional education on the uses of the Relative Value Study; the distribution of the study upon request; and the revision of the Relative Value Study at appropriate intervals to keep it up to date.

COMMITTEE ON RELIGION AND MEDICINE

(Board of Trustees)

Robert Mendelsohn, *Chairman*
411 Briar Pl., Chicago 60614

Anna Marcus
5852 W. North Ave., Chicago 60639

Bertram Moss
5360 N. Lincoln, Chicago 60625

Charles W. Pfister
5511 N. Harlem Ave., Chicago

Paul S. Rhoads
251 E. Chicago Ave., Chicago

Morris Rothenberg
217 W. Clay St., Collinsville 62334

Harold Shinall
703 N. East St., Bloomington

Ernest Teagle
700 S. Jackson St., Belleville 62201

Otto Weiss
212 S. 16th St., Mattoon 61938

CONSULTANTS:

J. Ernest Breed
55 E. Washington St., Chicago

Caesar Portes
25 E. Washington St., Chicago

AUXILIARY REPRESENTATION:

Mrs. Sherman Arnold
10856 S. Avenue L, Chicago 60617

STAFF: James Slawny

Responsibilities and Purposes

The committee is responsible for the development of effective lines of communication between the physicians and the clergymen leading to the most effective care and treatment of the patient and his family.

RURAL HEALTH AND STUDENT LOAN FUND

(Board of Trustees)

Jack L. Gibbs, *Chairman*
24 Main St., Canton

Thomas C. Bunting
321 W. Washington, Pittsfield

Jacob E. Reisch
1129 S. Second St., Springfield

Charles N. Salesman
1201 N. Allen St., Robinson 62454

STAFF: Roland King

Responsibilities and Purposes

The committee shall be responsible to the Board of Trustees in matters related to improving the standards of health in rural areas and with administration of the Student Loan Program operated jointly with the Illinois Agricultural Association. Members of the committee shall be appointed by the Board for terms of one year. The committee shall work closely with the Illinois Agricultural Association in efforts to improve the standard of health in farm areas. Also among these responsibilities is to induce physicians to practice in rural areas through the joint program with the Illinois Agricultural Association.

**COMMITTEE ON SCIENTIFIC ASSEMBLY
(Bylaws)**

	Term Expires
Robert T. Fox, <i>Chairman</i> 5601 N. Pulaski Rd., Chicago 60646	1968
John J. Brosnan 9156 Francisco Ave., Evergreen Park 60642	1967
Robert R. Fahringer 1230 S. 6th St., Springfield	1968
Charles P. McCartney 5841 S. Maryland Ave., Chicago 60637	1969
Harold P. McGinnes 2304 E. Oakland Ave., Bloomington	1967
Robert G. Page 950 E. 59th St., Chicago	1967
J. Robert Thompson 5601 N. Pulaski Rd., Chicago 60646	1969
Donald L. Unger 185 N. Wabash Ave., Chicago	1968
CONSULTANT: William M. Lees 7000 N. Kenton Ave., Lincolnwood	
AUXILIARY REPRESENTATION: Mrs. Michael G. Matino 601 N. Taylor Ave., Oak Park 60302 Mrs. Wendell F. Roller 309 S. Main St., Monmouth 61462	
STAFF: Albert G. Boeck, Jr.	

*Responsibilities and Purposes Described in
Constitution and Bylaws*

**COMMITTEE ON SCIENTIFIC EXHIBITS
(Board of Trustees)**

Coye C. Mason, <i>Chairman</i> 2052 N. Orleans, Chicago
Raymond Firfer 7330 Cortland, Elmwood Park
Charles P. McCartney 5841 S. Maryland Ave., Chicago
Joseph Kozma 1440 N. Walnut, Jacksonville
Franklin Lounsbury 707 Fairbanks Ct., Chicago 60611
Lawrence W. Peterson 929 Michigan Ave., Wilmette
STAFF: Albert G. Boeck

Responsibilities and Purposes

This committee shall function with the Committee on Scientific Assembly to establish the qualifications, standards and regulations affecting scientific exhibitors at the annual convention; it shall solicit scientific exhibits of current medical interest, and select those most suitable for the ISMS convention.

SCIENTIFIC SECTION CHAIRMEN

ALLERGY: Arnold Gutman 111 N. Wabash Ave., Chicago
ANESTHESIOLOGY: John T. Nelson 277 Jefferson Ave., Elgin
DERMATOLOGY: I. M. Felsher 5720 W. Fullerton Ave., Chicago 60639
EYE, EAR, NOSE & THROAT: Roland I. Pritikin 1211 Talcott Bldg., Rockford 61101
INTERNAL MEDICINE: Angelo P. Creticos 67 E. Madison St., Chicago
NEUROLOGY & PSYCHIATRY: Harold E. Himwich State Research Hospital, Galesburg 61401
OBSTETRICS & GYNECOLOGY: William W. Curtis 100 W. Miller St., Springfield 62702
PATHOLOGY: Grover L. Seitzinger 812 N. Logan Ave., Danville 61832
PEDIATRICS: James Conner 550 N. Monroe, Hinsdale
PHYSICAL MEDICINE: W. T. Liberson P.O. Box 28, Hines 60141
PREVENTIVE MEDICINE & PUBLIC HEALTH: Fred Long 2116 N. Sheridan Rd., Peoria 61604
RADIOLOGY: Homer Goodlad Methodist Hospital, Peoria 61603
SURGERY: Lorin D. Whitaker 840 Jefferson Bldg., Peoria 61602

Responsibilities and Purposes

The responsibilities of a section chairman are to work with the Committee on Scientific Assembly and the respective specialty groups, to plan and present the scientific program for the annual convention.

**ADVISORY COMMITTEE TO STUDENT A.M.A.
(Board of Trustees)**

Wright Adams, <i>Chairman</i> University of Chicago School of Medicine 5755 Harper Ave., Chicago 60637
Edward J. Krol Stritch School of Medicine Loyola University, 706 S. Wolcott Ave., Chicago
Louis R. Limarzi University of Illinois College of Medicine 1853 W. Polk St., Chicago
Norbert Metz 4600 N. Ravenswood Ave., Chicago Northwestern University Medical School 303 E. Chicago Ave., Chicago
David B. Radner Chicago Medical School 710 S. Wolcott Ave., Chicago

CONSULTANT:

William E. Adams
University of Chicago School of Medicine
950 E. 59th St., Chicago

STAFF: James Slawny

Responsibilities and Purposes

The committee is charged with the responsibility of maintaining liaison with officers of Student AMA Chapters in Illinois; establishing programs to acquaint medical students with the principles of organized medicine; and developing programs designed to advance the purposes of both organizations.

COMMITTEE ON TUBERCULOSIS
(Board of Trustees)

Charles K. Petter, *Chairman*
2400 Belvidere St., Waukegan
Otto L. Bettag
526 Crescent Blvd., Glen Ellyn
Kenneth G. Bulley
1329 N. Lake St., Aurora
John C. Devlin
310 S. Michigan Ave., Chicago
Charles W. Gray
2500 N. Rockton Ave., Rockford
Clifton F. Hall
1517 Noble Ave., Springfield
Hiram T. Langston
1919 W. Taylor St., Chicago
David F. Loewen
400 W. Hay St., Decatur
Karl H. Pfuetze
Suburban Cook County Sanitarium
55th St. and County Line Rd., Hinsdale
William P. Standard
301 E. Jefferson, Macomb
George C. Turner
6627 Ponchartrain Blvd., Chicago

CONSULTANTS:

William E. Adams
950 E. 59th St., Chicago
Edward A. Piszezek
6410 N. Leona Ave., Chicago 60646
Darrell H. Trumpe
St. John's Sanatorium, Springfield

STAFF: Albert G. Boeck

Responsibilities and Purposes

This committee shall serve as a source of information on tuberculosis matters for the ISMS, and evaluate available information and make recommendations to the Board for the position the ISMS should take on issues in this area. It shall cooperate with institutions and voluntary health agencies in disseminating information on tuberculosis subjects to the profession and to the public. It shall

be on the alert for misleading or fallacious programs and information which need correction for the protection of the public.

**COMMITTEE ON USUAL AND
CUSTOMARY FEES**
(Board of Trustees)

Philip G. Thomsen, *Chairman*
13826 Lincoln Ave., Dolton
George F. Lull
400 E. Randolph St., Chicago
G. R. Marshall
300 N. Maple St., Effingham 62401
Joseph R. O'Donnell
444 Park Blvd., Glen Ellyn 60137
Joseph Shackelford
502 Shaw Ave., Paris
V. P. Siegel
4601 State St., East St. Louis
Francis W. Young
7939 S. Western Ave., Chicago
STAFF: Walter R. Livingston

Responsibilities and Purposes

The Committee on Usual and Customary Fees was appointed by the Board of Trustees to define the concepts of usual, customary, and reasonable fees, and to develop guidelines for the implementation of these concepts at the county, district, and state society level. In carrying out the directive that physicians be reimbursed on the basis of their usual and customary fees without reference to existing fee schedules, the committee meets with representatives of health insurance carriers, government intermediaries, and government agencies who pay for medical services, and reviews the adequacy and appropriateness of physician reimbursement in accordance with the position of the Board of Trustees and the House of Delegates.

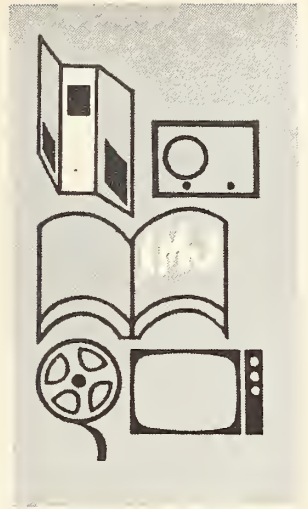
**ADVISORY COMMITTEE TO THE
WOMAN'S AUXILIARY**

Newton DuPuy, *Chairman*
1101 Maine St., Quincy
Caesar Portes
25 E. Washington St., Chicago
Arthur F. Goodyear
142 E. Prairie Ave., Decatur
STAFF: Robert L. Richards

Responsibilities and Purposes

The Advisory Committee to the Woman's Auxiliary shall consist of the President-Elect as chairman, the President, the Chairman of the Board.

The committee shall provide advice and assistance to the President of the Woman's Auxiliary in her program for the year, and shall assist her in interpreting the activities of the State Medical Society to the Auxiliary members.



ISMS SERVICES

Pursuit of Obligations

PURPOSES OF THE ILLINOIS STATE MEDICAL SOCIETY ARE:

- to promote the science and art of medicine
- to protect the public health
- to elevate the standards of medical education
- to unite the medical profession behind these purposes, and
- to unite with similar organizations in other states and territories of the United States to form the American Medical Association

The Society shall inform the public and the profession concerning the advancements in medical science and the advantages of proper medical care.

To fulfill these purposes, the Society maintains a headquarters office at 360 N. Michigan Ave., Chicago, and an office in Springfield at 520 S. Sixth St. Services of the Society, under the general su-

pervision of Robert L. Richards, Executive Administrator, are conducted by the following divisions, each of which is headed by a staff director:

Administration; Business Services; Economics and Insurance; Legislation and Public Affairs, and Publications and Scientific Services.

Many and varied are the activities of the Society in pursuit of its obligations. Some of these activities are major programs of statewide (and sometimes national) interest for all citizens; others are of special interest to doctors, and still others are sponsored for specific groups or individuals.

Following are descriptions of the Society's divisions and the programs, services and publications available directly to Society members or sponsored for their benefit.

DIVISION OF ADMINISTRATION

The Executive Administrator has the responsibility and the authority to provide for the smooth and efficient functioning of the Illinois State Medical Society.

The implementation of established policy, fiscal and budgetary matters; the employment of qualified personnel and the development and maintenance of personnel policies are all part of the Administrator's activities.

In order to provide the membership of the Society with the best professional staff services available, headquarters has been set up by divisions. The Division of Administration (which the Administrator directs personally) provides many important functions.

This Division develops liaison with the Board of Trustees and serves the chairman in carrying out his duties. It works closely with the speaker of the House of Delegates and the officers of the Society to provide a smooth and efficient atmosphere in which the House may function.

The controlling factor in all these areas is the Constitution and Bylaws. Cooperation is maintained with the Committee on Constitution and Bylaws to present to the House all suggested changes for official action.

The Division, through the Administrator, channels all legal inquiries and works with the General Legal Counsel and the Special Legal Counsel to provide guidance to the officers, trustees, committee chairmen and county medical society officers.

The duties and powers of the Executive Administrator are of utmost importance, and are outlined in the Bylaws of the Society.

DIVISION OF BUSINESS SERVICES

Just as the entire staff of the Illinois State Medical Society exists to serve the needs of more than 10,000 members, the Division of Business Services exists to serve the needs of the other staff divisions. Specifically, all mail room, printing, duplicating, and central-supply services are provided by this division.

Membership Records

Membership records are maintained so that quick access may be had to correct information concerning the basic membership history of each of our members. In addition, forms to obtain dues, address changes and other necessary information are designed and supplied to each county society secretary for their use.

Committees

The Committees on Membership, the Annual Leadership Conference, and Rural Health and Medical Student Loan Fund are assigned to this division for the staff services which might be required. The Committee on Membership has been dealing with the on-going problem of sound membership development. The Advisory Committee to the Annual Leadership Conference has the responsibility for

developing an enlightening program which will help county society leaders find better ways to serve both the public and their county society membership more effectively. The Rural Health and Medical Student Loan Fund Committee co-administers the joint Illinois State Medical Society/Illinois Agricultural Association Medical Student Loan Fund Program. Since its inception in 1948 the program has helped over 125 qualified applicants to hurdle financial or borderline academic barriers to a medical education. The objective of the program is to provide an incentive to the prospective medical students to enter family practice in the areas in Illinois that are in need of new physicians to serve their rural communities.

Accounting and Budget

Responsibility for providing safekeeping and proper accounting for all money and securities of the Society rests with this division, upon the direction and guidance of the Board of Trustees Finance Committee, the Secretary-Treasurer, and the Executive Administrator. Assistance is offered to all interested staff and officers in the interpretation of the division's regular and special accounting and budgetary reports.

Liaison with outside agencies in regard to matters affecting the finances of the Society is a prime responsibility of this division; the Internal Revenue Service, the Society's banking and investment agencies, office building rental agent, and the American Medical Association are major examples.

Insurance Coverage

Provision for and maintenance of the Society's property, liability, and employee insurance coverages are handled within this division, so that legal and financial requirements are satisfied at the most economical premium cost. In this area of responsibility, the assistance and cooperation of the Division of Economics and Insurance are utilized in order that best results for the Society may be obtained.

Standardization of office procedures and systems in order to reduce the cost and raise the efficiency of the office operation is a continuing assignment for the division. Assistance in personnel recruitment, job analysis, and salary range administration is provided to the Executive Administrator and other division directors.

DIVISION OF ECONOMICS AND INSURANCE

The Division of Economics and Insurance is responsible for supplying a wide variety of information on economic topics and insurance data to members of the Illinois State Medical Society. The division is frequently called upon to prepare speeches, write and publish pamphlets and other materials and make them available for distribution on such subjects as public aid in Illinois, medical care financing through Social Security, and physician retirement programs.

The division, so far as it is possible to do so, designs and directs research in the area of economics. Such projects have included the Relative Value Survey and the Social Security poll.

Reference Library

A library providing a reference source for membership and staff use is maintained. Information is available on the cost of medical care; foreign medical care systems; needs and wants of the aged, their medical care, housing, health, finances and employment; and the Social Security system, its benefits, costs, financing, and coverage.

The division also provides information on matters pertaining to group insurance and retirement plans for the members of the state medical society and administrative staff.

Public Aid Liaison

Familiarity with the medical care programs of the Illinois Department of Public Aid and liaison with the staff of the department are other responsibilities of the division. Liaison is also maintained with public and private agencies interested in the fields of aging, insurance, hospitals, and rehabilitation.

Periodically information is prepared for physicians and the public pertaining to such medical care programs as Old Age Assistance, Aid to the Medically Indigent, and the Military Dependents' Medical Care.

The division provides staff services to committees involved in economics, usual and customary fees, aging, prepayment plans, insurance, rehabilitation, hospitals, medical care programs through public aid, state and government programs of medical care, the accreditation of hospitals and nursing homes.

DIVISION OF PUBLIC RELATIONS

The Public Relations Division normally serves as the Society's source of information, or news outlet, to the lay press, radio and television. With increasing frequency, the division is contacted by news reporters, science writers and authors seeking to verify the accuracy of a report. Its counseling services on public relations and publicity are available to any county medical society.

A mailing list of all newspapers, radio and television stations in Illinois is maintained by the division. The list is so arranged that news releases may be addressed to individual counties, and county society secretaries may avail themselves of this service.

News releases for county societies are automatically prepared by the division staff and distributed to all news outlets in the particular county whenever a county society makes use of the ISMS post-graduate education program. Other than this, the state society's staff does not prepare news releases of county society activities unless this service is specifically requested.

Health Columns for Newspapers

Currently, ISMS presents a weekly public service health column entitled "Dr. 'SIMS' Says: Safeguard Your Health." This column, offered to the 650 newspapers in Illinois, carries a new logotype of Dr. "SIMS" which readily identifies the column with the Illinois State Medical Society. The division would appreciate hearing from members in areas where the column is not appearing.

Pamphlets Available

As a vital part of the continuing "positive public relations" programs of the ISMS, pamphlets on a variety of health subjects are available to the county medical societies for the asking. Doctors should have these pamphlets in their waiting rooms. Attractive pamphlet racks with literature are available at a cost of only one dollar each by writing to this division.

Other materials available from the Public Relations Division are described on the following pages. These materials include exhibits, radio-television programs, disaster hospital manuals, medical career recruitment materials, speakers' bureau information, and films.

Committees of the Society serviced by the Public Relations Division are Disaster Medical Care, Ethical Relations, Fifty-Year Club, Grievance, Medicine and Religion, Medical Assistants, Public Relations, Public Safety, and the Advisory Committee to Student AMA Chapters.

DIVISION OF PUBLICATIONS AND SCIENTIFIC SERVICES

All publications of the Society, including the *Illinois Medical Journal*, are produced through this division. The Journal, the official publication of the Society, is mailed monthly to all members, who are urged to read it to keep abreast of the scientific, economic, political, legal and social developments within the state. The editor welcomes suggestions for articles which may be of special interest to members.

Committee Responsibilities

Services to 20 scientific committees are provided by this division. These committees, made up of physicians, provide guidance to the Board of Trustees and House of Delegates in areas of special medical interest. They make recommendations for policy and programs involved in cancer, cardiovascular disease, eye health, environmental health, child health, mental health, nursing, nutrition, radiation safety, medical education and tuberculosis. Others study the problem of maternal welfare and perinatal mortality in cooperation with the State Department of Public Health.

Staff members of the division coordinate and implement the activities of the Committee on Continuing Education to provide scientific programs for district and county medical society meetings.

Annual Convention

Similarly, the staff serves as an arm of the Committee on Scientific Assembly to arrange and produce the annual convention of ISMS. Held in May in Chicago each year, the convention offers scientific meetings and exhibits as well as sessions of the House of Delegates.

A new function of the division is to administer the affairs of the Educational and Scientific Foundation, a non-profit organization established to conduct educational and scientific projects related to medicine. Physicians are invited to become Fellows of the Foundation for a charter membership of \$100.

DIVISION OF LEGISLATION AND PUBLIC AFFAIRS

As professional medicine strives to maintain the vigorous condition of the public health, the profession is vitally and intimately concerned with legislative actions of the Illinois General Assembly and the U. S. Congress which affect physicians, other members of the healing arts, and the lay public. To insure that the best health interests of the public and professional interests of the physician are served, the Division monitors all state and national legislation which affect the health of the individual and his community.

The monitoring process is designed to present the thoughtful views of professional medicine in Illinois on specific medically related pieces of legislation.

The ISMS Legislative Committee acts as the clearing house for legislative proposals recommended by specialized ISMS committees; generated by allied groups; produced by special interests and introduced by representatives and senators. Such legislation is thoroughly analyzed by physician-members of the specialized ISMS committee covering the subject matter of the introduced legislation.

Support or Oppose Legislation

Upon appropriate consideration and recommendation, legislation of medical significance in the Illinois

Legislature is either supported or opposed to protect and promote the interests of the public and the profession. Pertinent subject matter testimony is presented before the House and Senate committees as the bill proceeds through the legislative process.

On-the-scene surveillance of monitored legislation is maintained by ISMS legislative representatives.

Through these essential actions, ISMS plays a meaningful role in shaping legislation for the betterment of the people of Illinois.

Action similar to the above is taken with respect to bills in Congress when they have special significance to Illinois physicians. This activity is conducted in concert with the American Medical Association.

Integrated with and designed to augment the legislative activity is the Public Affairs Program. This program, executed by the Division of Legislation and Public Affairs, as directed by the ISMS Public Affairs Committee, strives to alert the physician to his role in public affairs and to involve him in effective participation in public affairs in his community, state, and nation.

Other Activities

Divisional activity also includes other services. One of these, involving medicine, law, and the judiciary, is the administration of the Impartial Medical Testimony program. Operating in conjunction with the Supreme Court of Illinois and the Federal District Court, the services of impartial medical examiners are provided in personal injury cases.

Other facets of medical-legal interaction are explored and problems resolved through liaison with like committees of the judiciary and the bar associations.

In addition to the foregoing, special and ongoing programs and activities of the Archives Committee, Benevolence Committee, Committee on Occupational Health, Committee on Narcotics and Hazardous Substances, Committee on Quackery, Medical-Legal Committee, and the Committee on Laboratory Evaluation are administered.

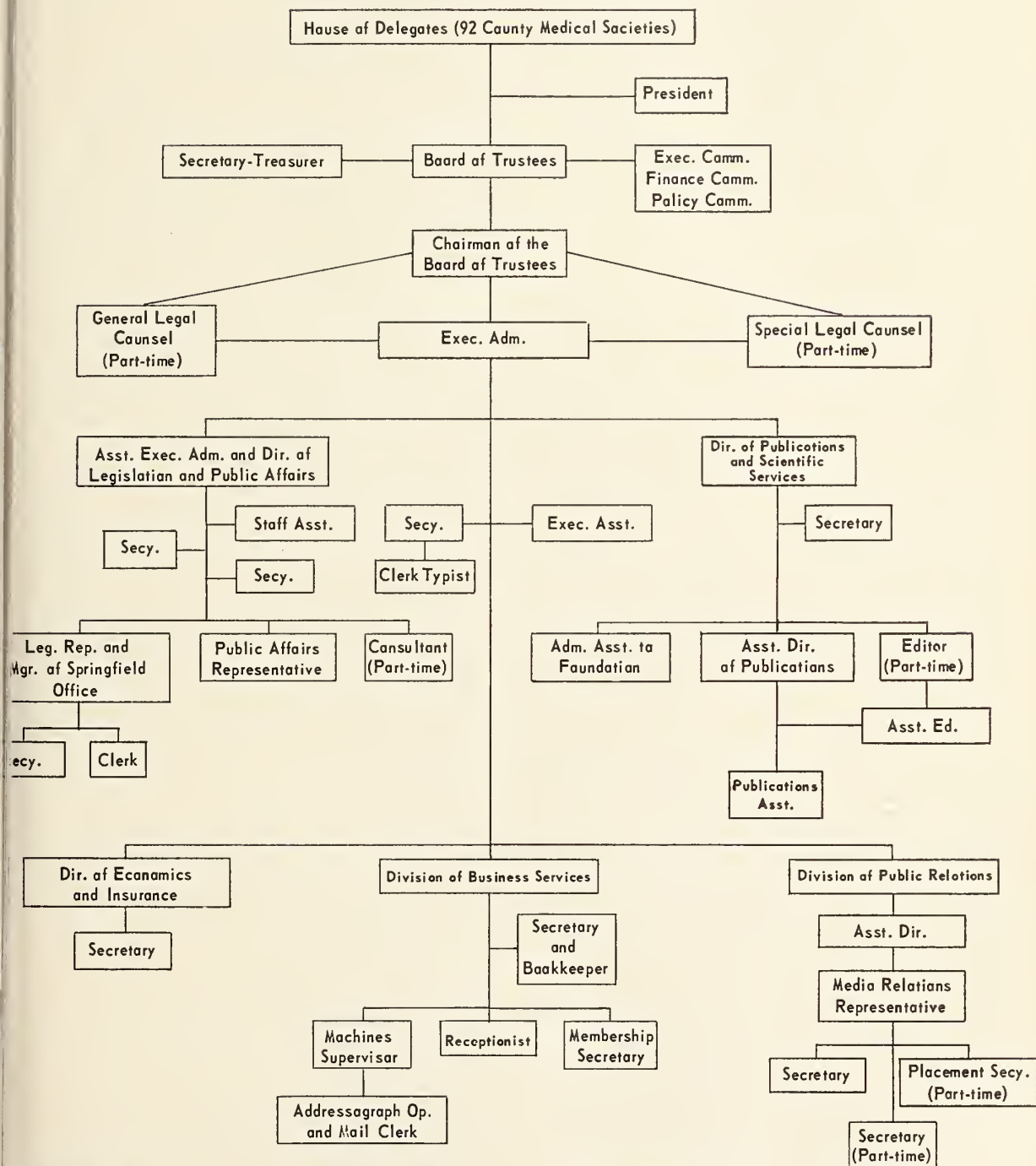
THE EDUCATIONAL & SCIENTIFIC FOUNDATION

The Educational & Scientific Foundation was founded to provide an administrative agency to foster the advancement of medical science through:

- 1) The initiation of scientific and medical research activities.
- 2) The collection, evaluation and dissemination of the results of research activities to the public.
- 3) The implementation and management of projects related to medicine for individuals or organizations seeking to inform or educate others, or to improve their own knowledge.

ISMS STAFF ORGANIZATIONAL CHART

(As of January 1, 1966)



29 Full-time Employees

1 Foundation Employee

6 Part-time Employees

FILMS

Stroke—Early Restorative Measures in Your Hospital

A film, entitled "Stroke—Early Restorative Measures in Your Hospital," produced by the ISMS Committee on Aging, is available from the Society.

Directed toward physicians in all general hospitals, regardless of size, the film illustrates simple and effective methods and devices used in the rehabilitation of stroke patients. It emphasizes the procedures to be instituted immediately upon the patient's admission to the hospital.

Primary purpose of the film is to inform physicians and nurses of the need for immediate action in stroke cases and to interest them in acquiring additional details for treatment through available publications or study courses.

The 20-minute sound, color film illustrates a program of constructive rehabilitation which progresses through three stages: (1) proper positioning, (2) transfer activities and early ambulation, and (3) training for self-care. It indicates how these major steps can be conducted in any hospital, however small, by an interested nurse using a minimum of equipment.

The film may be obtained from the Society on a loan basis for viewing without charge or may be purchased for \$125.

Medicine-Religion Film

The ISMS Committee on Medicine and Religion has produced a 12-minute color film entitled "Not By Bread Alone." The film, which demonstrates the serious consequences of physicians and clergymen not working together, is intended to stimulate the formation of medicine-religion committees at the county level.

A copy of the film has been sent to each county medical society in the state. Additional copies for showing by other groups are available from ISMS.

Modern Management of Multiple Births

"Modern Management of Multiple Births" is a 16 mm. sound-color motion picture produced by the Educational and Scientific Foundation of the Illinois State Medical Society in cooperation with Lederle Laboratories Division of American Cyanamid Co.

Teaching "heart" of the film is step-by-step reconstruction of an elaborate protocol which serves as a standard of prenatal planning for any physician faced with the management of multiple pregnancy.

Included are techniques of using a placetogram and the obstetrical procedures employed in breech and transverse lie presentations.

For added teaching interest, the film reviews birth of identical quadruplets, showing how identicality

was established with major and minor blood typings, examination of placenta and fetal membranes and other procedures. There are also scenes of actual delivery of quadruplets.

Showings of the film are restricted to professional audiences. Organizations may borrow the film from Lederle Laboratories Film Library, Pearl River, N. Y., or from the Illinois State Medical Society, 360 N. Michigan Ave., Chicago 60601.

SPEAKERS

County Medical Society Speakers' Bureau

The Illinois State Medical Society recognizes that one of the prime responsibilities of the medical profession is to maintain and improve good relations with the public. For that reason it encourages county medical societies to set up speakers' bureaus to supply physician speakers to interested lay groups in the area.

The Public Relations Division of ISMS has prepared a comprehensive instructional guide entitled, "How to Set Up a Speakers' Bureau," to help county societies communicate with the public. The booklet, available from the Society without charge, includes information on speakers' rosters, suggested audiences, and publicity helps.

Scientific Speakers Bureau

The Illinois State Medical Society, through its Scientific Speakers Bureau, aids county societies in their efforts to keep members abreast of medical advances. Sponsored by the ISMS Committee on Continuing Education, the bureau helps local groups arrange and conduct postgraduate medical education programs in their own areas. This assistance includes obtaining speakers, helping them with travel arrangements, preparing and mailing notices of meetings, and paying an honorarium and travel expenses. ISMS can also provide publicity services upon request.

It also pays a \$50 honorarium and expenses for individual speakers obtained by county medical societies for their regular meetings.

The Bureau operates under a grant from Merck, Sharp & Dohme, which provides funds to the ISMS Educational and Scientific Foundation for the specific purpose of obtaining speakers for county medical society meetings.

The following procedures govern use of the Bureau:

- 1) County societies select speakers from a roster containing the names of more than 400 speakers and over 1,000 topics.

- 2) Eight weeks advance notice is required for postgraduate meetings. Requests for such meetings, which usually are scheduled for an entire afternoon, should be sent to the chairman of the Committee on Continuing Education, Illinois State Medical Society, 360 N. Michigan Ave., Chicago.

3) Publicity to media in the area of the meeting will be handled by ISMS upon request of the county society.

4) Postcard notices will be mailed to physicians in the county if requested. ISMS will prepare and mail notices if the information is received no less than three weeks prior to the meeting.

5) The county medical society program chairman and the speaker are both expected to submit to ISMS a report on the meeting and the arrangements.

SPECIAL PUBLICATIONS

What Goes On in Illinois

What Goes On in Illinois is a calendar of medical and scientific meetings conducted in Illinois and adjacent states. It contains information about conventions, medical meetings, seminars and short courses conducted by educational institutions, hospitals, specialty societies, and voluntary health organizations. Published by the Illinois State Medical Society under a grant from Lederle Laboratories, *What Goes On in Illinois* is mailed to all doctors in Illinois and other interested persons 10 times a year. Combined issues are published in July-August and November-December.

Program chairmen of organizations or institutions sponsoring scientific meetings open to medical and paramedical personnel outside of their own membership are invited to submit pertinent information to *What Goes On in Illinois*, c/o the Illinois State Medical Society, 360 N. Michigan Ave., Chicago 60601. Deadline for copy is 35 days in advance of publication.

Pulse

Pulse is a monthly newsletter published by the Illinois State Medical Society under a grant from Roche Laboratories, Division of Hoffmann-LaRoche, Inc. It is distributed to all doctors in the state, to members of the Woman's Auxiliary and Illinois Medical Assistants Association, and is supplied in quantity to hospitals for interns, residents and other personnel.

Pulse carries non-scientific news, photographs and feature materials of interest to the medical profession in Illinois. A special section is devoted to the activities of the Woman's Auxiliary.

Government Medical Care Bulletin

The objective of this publication is to inform the membership of activities, procedures, regulations and data concerning implementation of government medical care programs and the policies and actions of the State Medical Society in these matters.

The Bulletin was created after the passage of the Medicare Act (PL-89-97) and the Heart Cancer and State legislation (PL-89-239) as a vehicle of guidance for the physician member.

It will continue to be distributed as new information becomes available on the government programs.

The Relative Value Study

The Relative Value Study, undertaken by the Relative Value Committee, was completed, printed, submitted to and approved by the ISMS House of Delegates in 1964. Copies of the study are available from the Society. The study is a compilation of unit values referred to as relative value indexes, and derived from average fees customarily charged by Illinois physicians for services rendered to patients.

The primary purpose of the Relative Value Study is to provide individual physicians with a reliable factual guide for evaluating their own services.

The 1961 House of Delegates authorized the study and approved it with modifications at the 1963 annual meeting. The statistical techniques employed in this study, the data resulting therefrom, the wealth of information contained in the study itself and its adaptability make the study superior to similar studies previously undertaken.

Comb-1 Insurance Form

Because of the variety of data required for health insurance claims, the Comb-1 Form was developed jointly by the American Medical Association and the Health Insurance Council to simplify and reduce the number of attending physicians forms equally acceptable to the health insurance industry and the medical profession.

Information requested by many diverse forms from a large number of insurance companies was first classified and minimum needs for claim purposes were determined. Then appropriate and clearly worded questions were developed and arranged in a standard sequence, to facilitate completion. Out of this came two basic forms, one for group health insurance and one for individual health insurance, and four abbreviated forms. A further simplification involved devising an all-purpose form which is a combination of the group and individual forms—the Comb-1 Simplified Health Insurance Claim Form.

These forms are available to physicians from the Illinois State Medical Society and should be substituted for any non-standardized forms received. Each physician has been asked to voluntarily adopt the following procedure:

- 1) When a physician receives a form from an insurance company bearing the HIC symbol it should be completed and returned to the company.
- 2) When a physician receives a form *not* identified by the HIC symbol, the standardized form should be filled out and clipped to the unacceptable form with both forms returned to the insurance company.
- 3) If the insurance company insists upon having its own form completed, the doctor should feel justified in making a reasonable charge for the added work involved in handling the non-standardized form.

The attempt to standardize these forms is an aid in cutting back on the ever-increasing load of paper work involved in medical practice. Forms are available without charge from the ISMS Division of Economics and Insurance while the supply lasts.

Disaster Hospital Manual

The responsibility of providing immediate medical and hospital care in disasters of any magnitude falls directly on physicians, nurses and hospitals. To aid Illinois communities in developing disaster plans, the ISMS Committee on Disaster Medical Care has adopted a model emergency plan for hospitals.

Originally developed by the Memorial Hospital of DuPage County, Elmhurst, the plan is recognized as a model by the Office of Defense Mobilization in Washington, D. C. Copies are available from the Society.

Medical Career Recruitment Programs

As man has advanced his life expectancy, it follows that many additional young men and women are and will be needed as members of the health team. Youth must be counseled early in their academic years in order to receive the proper educational background for a doctorate of medicine or allied health field degree.

The Woman's Auxiliary of the ISMS has been the spearhead force in Illinois to interest and recruit the youth of the state in medical careers. Members are asked to aid this effort by investigating the possibility of conducting or participating in career days in their home communities.

A pamphlet entitled "The Opportunities and Rewards of Medicine Can Be Yours" and a "Career Information Form" are available from the society.

PHYSICIANS PLACEMENT & STUDENT LOAN FUND PROGRAM

The Illinois State Medical Society not only offers help to students who wish to become physicians, but also is able to assist the careers of those already licensed to practice medicine.

The society provides this aid through two special activities. First is its own Physicians Placement Service. Second is the Illinois Medical Student Loan Fund Program that the society sponsors in conjunction with the Illinois Agricultural Association.

Physicians Placement Service

The Physicians Placement Service is designed to help physicians find a desirable area in which to establish practice or to relocate. The program's purpose is twofold, since it is interested also in helping those communities which demonstrate need of a resident physician.

More than 400 medical doctors have been placed through this program since its inception shortly after World War II.

The Physicians Placement Service maintains an up-to-date listing of some 150 "open" areas needing general practitioners. It maintains a similar listing of areas in need of specialists in a given field.

This service accepts requests from both physicians and communities for satisfactory placement. In addition, physicians are referred to the service by a number of organizations, among them the American Medical Association, the Illinois State Health Department and the Illinois Agricultural Association. Frequently, responsible citizens or overburdened physicians in a community will contact the service.

Another important function of the Physicians Placement Service is to assist small communities in developing programs to attract physicians.

The Physicians Placement Service sends a questionnaire to the applicant physician to obtain information on his educational background, his interests and preferences of type of practice. Upon return of the questionnaire, the physician is sent a complete list of openings. Each opening is detailed on its facilities for home life, office space, proximity to hospital facilities and other specifics. The physician is also sent bulletins with information on new locations as they develop.

The Physicians Placement Service offers its assistance to all qualified physicians who request it. An applicant need not be a member of the state medical society. There is no charge either to the physician or to the community seeking the services of this program.

Inquiries may be addressed to the Physicians Placement Service, Illinois State Medical Society, 360 N. Michigan Avenue, Chicago, Illinois, 60601.

Illinois Medical Student Loan Fund Program

The Illinois Medical Student Loan Fund Program is designed to help those who have got what it takes to become a physician but lack the money or a recommendation for medical school. Since its inception in 1948, the program has helped over 125 qualified applicants to hurdle financial or borderline academic barriers to a medical education.

Loans to students in need are provided by joint contributions from the Illinois State Medical Society and the Illinois Agricultural Association. The program offers loans of \$625 per semester—up to a total of \$5,000 over a four-year period. A two per cent interest rate is charged semi-annually from the time the loan is received. The borrower must also insure himself for the entire amount of the loan and pay premiums on the policy. However, he has seven years—time to complete his education, internship and two years of practice—before the first principal payment is due.

The program also offers assistance to those who may not have financial difficulties but can't get into a "Class A" medical school because their college grades are marginal. The board representing the sponsoring organizations of the program can recommend 10 candidates annually to the University of Illinois College of Medicine in Chicago. After care-

ful screening to determine whether the applicant has the potential to make a good medical student, the board can recommend him for admittance on the basis of its investigation.

In return for this assistance from the Medical Student Loan Fund Program, the applicant must agree to practice medicine in an Illinois town—generally of approximately 5,000 population—for five years. The applicant may select a town from an up-to-date list of communities which have demonstrated need and ability to support a physician, but choice is subject to approval by the program's board. The purpose of this agreement is to provide family doctors for the smaller rural communities in Illinois.

To be considered for assistance from the Medical Student Loan Fund Program, an applicant must be recommended by the presidents of his home county medical society and farm bureau. Rules of eligibility require that an applicant be a male pre-medical student of at least three years college standing . . . an Illinois resident outside of Cook County . . . and that he take a medical college admissions test for review by the program's board.

The board of the Medical Student Loan Fund Program conducts its annual interview about Jan. 1 for those students who wish to enter medical school the following September. Those approved for assistance are accepted on a comparative and competitive basis. Information and applications may be obtained from Roy E. Will, secretary, Joint Medical Student Loan Fund Board, Illinois Agricultural Association, 1701 Towanda Ave., P.O. Box 901, Bloomington.

INSURANCE PROGRAMS

Retirement Investment Program

The Board of Trustees of the Illinois State Medical Society has approved the *Retirement Investment Program* which makes available to members a means of providing for retirement with group advantages an individual physician could not otherwise obtain. The group annuity and mutual fund portion of the program may also be used as funding vehicles for Keogh qualified investment if so desired. The Tax Qualified Retirement Program (Keogh) and the Retirement Investment Program permit balanced investments to counter economic fluctuations.

Annuities or mutual funds alone do not meet the problems of recession and inflation, but together they do permit a sound retirement plan.

The group annuity provides a guaranteed lifetime income at retirement, serving as a hedge against periods of recession or declining prices, while the mutual fund provides an opportunity for common stock investment serving as a hedge against periods of inflation or rising prices.

A member physician wishing this type of retirement protection may obtain it through the Illinois State Medical Society. By doing so he not only

receives advantages he would not otherwise have but he is able to benefit from the collective opinions and research facilities of the insurance company and the mutual fund's investment advisor.

The *Retirement Investment Plan*, making available the group annuity at a substantial reduction in premium, and the mutual fund, offered without sales commission load, is one of the most recent of its kind and was developed after several years of study taking into consideration other group plans and retirement alternatives.

The size of the retirement contribution, the proportion of investment between the group annuity and the mutual fund, and the retirement age are determined by the participating physician.

The Continental Illinois National Bank and Trust Co. of Chicago receives all physicians' contributions, and maintains records.

Group Annuity

The group annuity, underwritten by the Continental Assurance Co., participates in dividends which are reinvested annually at compound interest.

The group annuity may provide an insurance death benefit and a total and permanent disability guarantee. In the event of death prior to retirement, a member's beneficiary would receive the death benefit or the cash value of the annuity whichever is greater.

Six options for settlement at retirement are available under the annuity. The most frequently chosen is the life income option which guarantees a base income for life that can never be outlived. With the increase of life expectancy there is a danger of depleting capital during advanced years. However, the group annuity assures, at least, a base or fixed income which cannot be outlived. Of equal importance, is the fact that settlement may be arranged under the group annuity to guarantee at least a return of the member's investment to his beneficiary if he elects a life income and dies shortly after retirement.

Mutual Fund

The no load open end mutual fund, consisting primarily of common stocks, is managed by Stein Roe & Farnham of Chicago, which has been serving as investment adviser to pension and profit sharing trusts, trustees, individuals, and other investors since 1932.

The Stein Roe & Farnham Stock Fund is quoted daily in most major newspapers and the *Wall Street Journal*. The fund has no sales commissions. The investment adviser receives a quarterly management fee of $\frac{1}{8}$ of 1 per cent of the average net asset value of the fund. Management fees are common to all mutual funds and are distinct from sales loads.

Members wishing additional information on the Society's sponsored program may write to the Illinois State Medical Society, Division of Economics & Insurance, 360 N. Michigan Ave., Chicago.

Group Disability Program

The Illinois State Medical Society has officially approved a group disability program which is available to all eligible members of the ISMS up to age 70 who are regularly attending all of the usual duties of their occupation. Three different types of coverage are available under the program, with an over-70 conversion privilege.

Benefits of the program are payable regardless of any other insurance and no restrictive riders may be attached. The master contract contains a special renewal condition whereby the individual coverage cannot be terminated.

Provision has been made for an adjudication committee to advise the carrier on claims and other administrative problems. The adjudication committee will review the medical data and make recommendations regarding coverage which the insurance company might otherwise reject.

The program is explained in detail in a brochure which is available from the Society's Director of Economics and Insurance or by writing directly to Parker, Aleshire & Co., 9933 Lawler Ave., Skokie.

Group Major Medical Expense Plan

The \$15,000 Group Major Medical Expense Plan designed for the Illinois State Medical Society has a 20% co-insurance feature and a \$500 or \$1,000 deductible, whichever the physician selects. For hospital room and board, the Plan will pay up to \$30 a day and up to \$45 a day in an intensive care unit. It will pay \$20 a day in a convalescent home following release from a hospital up to 90 days. The Plan also provides maximum coverage for the insured in the event of mental illness and up to \$2,000 for dependents. It will also cover a congenital anomaly from the first day of birth after the effective date of the contract up to \$2,000.

New members joining the Society will be allowed to enroll without evidence of insurability or a health statement under age 40 within six months after notification of the Plan's availability.

The Group Major Medical Expense Plan is outstanding and will provide members with protection against catastrophic illness.

The Plan is underwritten by the Commercial Insurance Co. of Newark, N. J., and is administered by Parker, Aleshire & Co., Chicago. Additional information may be obtained from the Illinois State Medical Society, Division of Economics and Insurance.

IMPARTIAL MEDICAL TESTIMONY

The Impartial Medical Testimony program, in which the Illinois State Medical Society participates, is designed to elicit objective medical truth and facilitate the equitable disposition of personal injury cases in the courts of Illinois.

As a technique of judicial administration, impartial medical testimony examiners are ordered by the court when there is evidence of a wide divergence of medical opinion in the personal injury

which is subject to litigation. The introduction of the IMT examiner and subsequent examination of injuries provide the court with objective, impartial medical data for use in pre-trial conferences and in jury trials.

Authorization for the use of IMT examiners was established by the introduction of Illinois Supreme Court Rule 17-2 in September 1961. The Rule states, "When in the discretion of a trial court, it appears that an impartial medical examination will materially aid in the just determination of a personal injury case, the court, a reasonable time in advance of the trial, may on its own motion or that of any party, order a physical or mental examination of the party whose mental or physical condition is an issue. The examination shall be made without cost to the parties by a member or members of a panel of physicians chosen for their special qualifications by the Illinois State Medical Society. The court administrator and deputy court administrator are charged with the administration of this Rule.

"A copy of the report of examination shall be given to the court and to the attorneys for the parties. Should the court at any time during the trial find that compelling considerations make it advisable to have an examination and a report at that time, the court may, at its discretion so order. Either party or the court may call the examining physician or physicians to testify, also without cost to the parties. Any physician so called shall be subject to cross-examination. The court shall determine the compensation of the physician or physicians."

Illinois is distinguished in this matter by being the only state which has a court rule permitting the state-wide use of impartial medical testimony. The Illinois State Medical Society played a significant role in the creation and development of the IMT program. Impartial medical testimony in other states is limited to certain jurisdictions within the states.

To implement the IMT rule, the Illinois State Medical Society created a panel of impartial medical examiners. This panel is comprised of approximately 400 physicians who are grouped into 20 medical specialties. These IMT examiners were selected from approximately 4,000 nominated physicians. Composition of the panel is reviewed annually to maintain the highest standards for the courts of Illinois. The IMT examiners are selected from the panel in rotating sequence.

The IMT examiners are paid, on court approval of bills submitted, by the Illinois State Bar Association Foundation, which is the custodian and disbursing agent of a special IMT fund. This fund was made possible by grants from the Ford, Wieboldt, Deere, Woods, and Lilly Foundations.

In a personal injury case, the plan evolves as follows:

- 1) judge invokes Rule 17-2 (when in his judgment introduction of an IMT examiner will aid materially in the equitable disposition of the case);

- 2) judge contacts supreme court administrator, requesting IMT examiner (special forms are used for this purpose);
- 3) court administrator contacts Illinois State Medical Society for IMT examiner, as required by the character of the personal injury;
- 4) ISMS selects an IMT examiner from the panel of the medical specialty relating to the injury involved;
- 5) ISMS relates the identity of the IMT examiner to the court administrator;
- 6) court administrator schedules the examination of the plaintiff, and obtains pertinent medical records for the IMT examiner.
- 7) IMT physician examines plaintiff, and prepares medical report. This report is submitted to the court. Copies are prepared for the attorneys involved.
- 8) IMT examiner is available for court testimony, as required.
- 9) IMT examiner submits bill to the court.
- 10) the IBA Foundation disburses funds to pay for the IMT examiner.

The Illinois State Medical Society is deeply appreciative of its role in offering, in conjunction with the Supreme Court, this impartial medical service for the courts of Illinois. The IMT Committee of the state society is charged with the responsibility of implementing the IMT Rule, as required by the court.

MEDICAL SELF-HELP TRAINING PROGRAM

The Disaster Medical Care Committee of the Illinois State Medical Society strongly endorses the training of at least one person in each family on procedures to follow in the event of a medical emergency. This would be of value not only in the event of an atomic disaster, when physicians would not be available, but also in caring for other emergencies until the help of a physician can be obtained.

For this reason the Society presented "Medical Self Help Training" as an official television course over educational Channel 11 in Chicago early in 1964 and again in 1965. Over 10,000 persons enrolled in this course. Response was so enthusiastic that films of the complete 15-part, 7½-hour series have been made available to county medical societies, industries, schools, and television stations throughout the state.

For complete information on this film course, as well as a "live" course for group study presentations, write the Public Relations Division of the state society.

RADIO-TV PUBLIC SERVICE MATERIALS

Radio materials available from the Illinois State Medical Society include:

- 1) "Today's Health Tip"—a new 30-second health message every day. Available on records (30

messages per record) which feature the voice of Dr. "SIMS." For added local appeal, scripts are also available which can be read by local announcer or physician.

- 2) "Medical Interview"—a five minute weekly interview series featuring a different doctor each week, discussing subjects on practical health matters in language the layman can understand.

Television materials currently include one-minute animated spots on the subjects of measles, arthritis quackery, and rheumatic fever. Subsequent spots stressing preventive medicine will be produced during the course of the year.

In addition, the Division of Public Relations maintains a radio and television speakers' bureau, which obtains physician-speakers for radio and television interview shows on request.

Doctor's Responsibility to the Press

Physicians and the press are partners in providing a link of communication between the medical profession and the public. But, the press cannot carry out its traditional responsibility in informing the public in the area of medical and patient news without the cooperation of the medical society and individual doctors. The inevitable penalty of silence by the doctors is public ignorance, misunderstanding and fear. In a democracy, public ignorance, misunderstanding and fear can be dangerous to professional freedom.

The following outline—based on a press code adopted by the Macon County Medical Society—is suggested as a pilot guide for individual physicians and county societies in Illinois.

Availability

- 1) The officers, committee chairmen or designated spokesmen of county medical societies shall be available at all times to mass media personnel to provide authentic information on medical subjects.

- 2) A list of current spokesmen shall be supplied by county societies to the executives of every newspaper, radio and television station in the country.

- 3) These spokesmen may be quoted by name. They should not be considered by their colleagues as self-seeking, since authoritative attribution is done in the best interests of the public and the profession. (In addition, physicians are private citizens and as such are the subjects of news stories in their social and civic activities just like any other citizen.)

Physician News

Physicians, as scientists, are encouraged to give newspaper interviews and appear on radio and television programs on medical subjects. Physicians may report on new or unusual diseases or treatments within an ethical framework. In these instances, they should, whenever possible, notify their county society publicity chairman or the Illinois State Medical Society.

Physicians may be asked to comment as indi-

viduals on politically controversial subjects (such as socialized medicine). In this event, the physician should clearly indicate that he is expressing his personal viewpoint which should not be construed as a statement of medical society policy.

A medical society officer, however, should remember that any comment he makes—whether or not intended as personal viewpoint—is generally accepted as official policy.

Patient News

As the patient's personal physician, the doctor has an obligation to respect confidences that come to him in the performance of his duty and may not release news except with the patient's consent or

those authorized to speak for him. When the press learns of the illness of private patients from other sources, the physician may cooperate with the press in answering any inquiries in the interest of accuracy and to avoid embarrassment.

When news of patients is of such a nature that it automatically falls in the public domain, physicians should feel free to release information within the framework of this code.

Patient information may be given where the nature of injuries, illness or treatment is of special interest. The report of such information shall be more in the nature of scientific information, rather than an exposé of an individual affliction.

WOMAN'S AUXILIARY TO THE ILLINOIS STATE MEDICAL SOCIETY

The Woman's Auxiliary to the Illinois State Medical Society has an enviable record of 38 years of service to the state society and its constituent county societies. It has been our privilege and pleasure, under the guidance of the medical society advisory committees, to assist the county societies and the state society in their programs for the advancement of medicine, public health, and medical education.

In this year of challenge and change for the medical profession, our doctors will be under close scrutiny by their communities and it behooves all doctors' wives to take an active interest in the affairs of our government. On July 1, 1966, Medicare became a reality and it now will be our particular concern to prevent its extension by electing to public office those men and women who will continue to fight for our American way of life. Under the direction of our legislation and public affairs committees, our auxiliary program can be one of education: education first of ourselves and, in turn, education of the public about the medical profession.

Service to our communities, by being leaders in their health projects, is another phase of our program. Like it or not, each doctor's wife is a public relations agent. In what better way can we project the best image of the doctor and his family than through our auxiliary community service committees? By interesting ourselves in community service activities we not only offer real opportunities for meeting local needs, but we also offer one of the best—if not the best—means of moulding public opinion which we so seriously need today.

During the coming year the auxiliary will, of course, continue its interest in the Benevolence Fund of the Illinois State Medical Society and in the Education and Research Foundation of the American Medical Association. It will also support the International Health Activities Committee.

Membership in the auxiliary offers doctors' wives something not available to them in any other organization: the chance to work with other doctors' wives on behalf of the medical profession. There is an old saying that with some people you spend time; with others you invest it. Surely the time spent working in cooperation with other doctors' wives on auxiliary projects is time well invested. Auxiliary membership is open to every wife (or widow) of a physician in good standing in his county medical society.

The House of Delegates of the Illinois State Medical Society has endorsed the AMA-sponsored joint membership endeavor. It is now up to each county medical society to adopt this procedure. We are hopeful that the auxiliary can thus gain greatly, not only in numerical strength, but in an increased enthusiastic and active membership.

Dr. Blasingame, executive vice-president of the American Medical Association, has said: "Never before has organized medicine so needed the individual physician and auxiliary member. Never before has the individual physician so needed organized medicine and—the auxiliary."

MRS. NEWTON DUPUY
President

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TREASURER, Mrs. Glen Harrison, 148 N. Ahwahnee Rd., Lake Forest 60045

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5. Logan, McLean, Sangamon, Tazewell, Mrs. John Holman, 2000 Huntleigh Rd., Springfield 62704 (Sangamon)
6. Adams, Madison, Mrs. Maurice Woll, 164 Norwood Pl., East Alton (Madison)
7. Christian, Effingham, Macon, Marion-Clinton, Mrs. Forrest Martin, 235 Park Pl., Decatur 62522 (Macon)
8. Champaign, Coles-Cumberland, Crawford, Vermilion, Mrs. Joseph Mallory, 4 Wabash Ave., Mattoon 61938 (Coles-Cumberland)
9. Jefferson-Hamilton, Saline-Pope-Hardin, Mrs. William R. Durham, Indian Oaks Farm, P.O. Box 361, Harrisburg 62946 (Saline-Pope-Hardin)
10. St. Clair, St. Clair-Belleville Branch, Mrs. Howard Lange, 9 Berrywood Dr., Belleville (St. Clair-Belleville Branch)
11. DuPage, Kankakee, Will-Grundy, Mrs. Andrew G. Bustin, 830 Manhattan Rd., Joliet 60433 (Will-Grundy)

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ILLINOIS STATE GOVERNMENT

The state government is divided into three branches—legislative, executive, and judicial. The legislative power is vested in the General Assembly, which is composed of the State Senate and the House of Representatives (a bicameral assembly).

For representation in the General Assembly, there are 58 senatorial districts and 59 representative districts. Each senate district elects one senator; each representative district elects three representatives. Thus, the Senate has 58 members and the House 177. The senators are elected for four-year terms, and the representatives serve two-year terms. Under normal procedure, Senators in the districts having even numbers are elected in Presidential election years; those in districts with odd numbers are chosen at elections in the intervening even-numbered years. However, recent requirements for reapportionment have created changes in this pattern.

The General Assembly normally meets in the first six months of each odd-numbered year, although may be called into special session by the Governor. The General Assembly's functions are to enact, amend, or repeal laws or adopt appropriation bills, act on amendments to the United States Constitution, propose and submit amendments to the State Constitution, and to act to remove public officials.

When the House of Representatives is organized, a Speaker or presiding officer is elected for the biennium. The presiding officer of the Senate is the Lieutenant Governor. To facilitate the handling of legislation, the members of the Senate and House are assigned to designated committees to consider bills of like subject matter. These committees usually hold public hearings to discuss legislation before the measure is taken up by the entire House or Senate. There are approximately 50 committees.

NOTE

Following the November, 1966, elections, an insert will be provided listing members of the 75th General Assembly and the Illinois Delegation in the 90th Congress.

LEGISLATIVE BRANCH

Legislative Procedure

Each member of the General Assembly has the right to introduce bills or resolutions. After the introduction of the bill, it is referred to the appropriate committee. If the committee recommends the bill favorably, it is read a first time, usually by title, before the house in which it was introduced. A second reading must be held on a separate legislative day when amendments to it can be offered for consideration by the entire membership. The bill will then be given a third and final reading when it is acted upon by the entire membership of the house that is considering it.

Action by Both Houses

To pass, the bill must receive the favorable vote of the majority of the members elected (89 in the House; 30 in the Senate). These bills are then sent to the other house where essentially the same procedure is followed.

If, because of amendments in the second house, there are two versions of the same bill, conference committees may be appointed to work out the differences. Both houses must vote favorably on the same version of the bill before it can be sent to the Governor for his consideration.

If the Governor thinks the bill should become a law, he can either sign it or file it with the Secretary of State without his signature. If the Governor decides it would be unwise for the bill to become law, he can veto it. If he vetoes the bill, he must file a statement of objections. Two-thirds of the

members elected to the House can override the veto. He can also veto specific items of an appropriations bill.

Appropriation Bills

"Bills making appropriations of money out of the treasury shall specify the objects and purposes for which the same are made, and if the Governor shall not approve any one or more of the items or sections contained in any bill, but shall approve the residue thereof, it shall become a law as to the residue in like manner as if he had signed it. The Governor shall then return the bill with any objections to the items or sections of the same not approved by him to the House in which the bill shall have originated, which House shall enter the objections at large upon its journal and proceed to reconsider so much of said bill as is not approved by the Governor. Any item or section of said bill not approved by the Governor shall be passed by two-thirds of the members elected to each of the two Houses of the General Assembly, it shall become part of said law, notwithstanding the objections of the Governor. Any bill which shall not be returned by the Governor within ten days, Sundays excepted after it shall have been presented to him, shall become a law in like manner as if he had signed it, unless the General Assembly shall, by their adjournment, prevent its return, in which case it shall be filed with his objections in the office of the Secretary of State within ten days after such adjournment or become a law." (Article V, Section 16, Illinois Constitution)

EXECUTIVE BRANCH

The Constitution provides that the Executive Department shall consist of the Governor, Lieutenant Governor, and Secretary of State, Auditor of Public Accounts, Treasurer, and Superintendent of Public Instruction, and Attorney General. All of these officials are elected for four-year terms. The Treasurer is the only elected state official who cannot succeed himself.

STATE OFFICERS

Governor, OTTO KERNER, Dem., Glenview

Lieutenant Governor, SAMUEL H. SHAPIRO, Dem., Kankakee

Secretary of State, PAUL POWELL, Dem., Vienna

Auditor of Public Accounts, MICHAEL J. HOWLETT, Dem., Chicago

State Treasurer, WILLIAM J. SCOTT, Rep., Evanston

Attorney General, WILLIAM G. CLARK, Dem., Chicago

Superintendent of Public Instruction, RAY PAGE, Rep., Springfield

Department of Registration and Education

John C. Watson, Director

John B. Hayes, Superintendent of Registration

Ira T. Dawson, Assistant Director

The department is primarily concerned with the registration and licensing of the 25 different trades and professions. Three scientific surveys—the natural history survey, the water survey and the geologic survey are also under the jurisdiction of R&E, as is the administration of the state museum. The department is the implementing agent of the medical practice act.

Medical Examining Committee

George G. Jackson, M.D., Chicago

William Johnson, M.D., Galesburg

Burtis E. Montgomery, M.D., Harrisburg

Dale Richerson, D.O., Pontiac

Kenneth H. Schnepf, M.D., Springfield

Philip G. Thomsen, M.D., Dolton

Robert R. Walper, D.C., Chicago

Medical Practice Act Licensing and Enforcement Procedures

Illinois statutes provide for the licensing of physicians to practice medicine "(1) in all of its branches, and (2) licensing of those persons to practice without the use of drugs or medicine and without operative surgery."

The Medical Practice Act states, "no persons shall practice medicine or any of its branches or midwifery, or any system or method of treating human ailments without the use of drugs or medicines, or without operative surgery, without a valid existing license to do so." Applicant for license must pass an examination of his qualifications which must be satisfactory to the Department of Registration and Education.

Required Education

Minimum standards of professional education: 2 years' course of instruction in a college of liberal arts or its equivalent, or in such medical college in a course of instruction in the treatment of human ailments which course shall have been not less than 132 weeks in duration and shall have been completed within a period of not less than 35 months and in addition, a course of clinical training of not less than 12 months in a hospital. The college of liberal arts, medical school, and hospital must be reputable and in good standing in the judgment of the Department of Registration and Education.

All examinations provided by the Medical Practice Act shall be conducted by the Department of R&E. Examinations of applicants who seek to practice medicine in all of its branches which shall embrace the subjects of which knowledge is generally required of candidates for the degree of Doctor of Medicine by reputable medical colleges in the U.S., and shall be such in the judgment of the Department of R&E that will determine the qualifications of applicants to practice medicine in all of its branches.

Every license issued under the Act expires on July 1 of each even-numbered year. Every licensee under the Act may, biennially during the month of June of each even-numbered year, renew his license upon paying to the Department a renewal fee of \$10.

Revocation and Suspension of License or Certificate

The Department may revoke or suspend the license, certificate, or state hospital permit of any person licensed under the Act upon any of the following grounds:

1. Conviction of procuring or attempting to procure such an abortion as was made unlawful at the time under the provisions of the Criminal Code of the State;
2. Conviction of a felony;
3. Gross malpractice resulting in permanent injury or death of a patient; or engaging in dishonorable, unethical or unprofessional

conduct of a character likely to deceive, defraud, or harm the public;

4. Obtaining a fee, either directly or indirectly, either in money or in the form of anything else of value or in the form of a financial profit as personal compensation, or as compensation, charge, profit or gain for an employer or for any other person or persons, on the fraudulent representation that a manifestly incurable condition of sickness, disease or injury of any person can be permanently cured;
5. Habitual intemperance in the use of ardent spirits, narcotics or stimulants to such an extent as to incapacitate for performance of professional duties;
6. Holding one's self out to treat human ailments under any name other than his own, or the personation of any other physician;
7. Employment of fraud, deception or any unlawful means in applying for or securing a license, certificate, or state hospital permit to practice the treatment of human ailments in any manner, or to practice midwifery, or in passing an examination therefor, or wilful and fraudulent violation of the rules and regulations of the department governing examinations;
8. Holding one's self out to treat human ailments by making false statements, or by specifically designating any disease, or group of diseases and making false claims of one's skill or of the efficacy or value of one's medicine, treatment or remedy therefor;
9. Professional connection or association with, or lending one's name to, another for the illegal practice by another of the treatment of human ailments as a business, or professional connection or association with any person, firm, or corporation holding himself, themselves, or itself out in any manner contrary to this Act;
10. Revocation or suspension of a medical license in a sister state, which revoked or suspended license was the basis of the licensee's obtaining a license in this State."

Rules and Regulations Adopted for the Administration of the Illinois Medical Practice Act, Effective March 18, 1955

RULE I—ACCREDITED COLLEGES OF MEDICINE AND SURGERY

Medical colleges having rules and curricula commensurate with and equivalent to the rules and curricula of the College of Medicine of the University of Illinois, will be considered for accreditation by the Department of Registration and Education.

RULE II—ACCREDITED COLLEGES TEACHING SYSTEMS OF TREATING HUMAN AILMENTS WITHOUT THE USE OF DRUGS OR MEDICINE AND WITHOUT OPERATIVE SURGERY.

A professional college or institution teaching a system of treating human ailments without the use of drugs or medicine and without operative surgery shall be deemed reputable and in good standing in the judgment of the Department upon submission of proof of the following requirements:

(a) That a Dean or other Executive Officer, employed on a full-time basis supervises the students and curriculum.

(b) That the faculty is comprised of graduates in their specialty from recognized professional colleges or institutions.

(c) That the faculty is organized and each department has a director, professors, associate professors and assistant professors, each responsible to his superior for his instruction in the particular subject he teaches.

(d) That, annually, a catalogue or brochure is published setting forth the requisites for admission to the college, tuition rates, courses offered, dates of sessions, schedule of classes, requirements for graduation, a roster of the undergraduate students and a roster of the last graduating class. The catalogue or brochure shall contain a list of the departments of the school, the titles of the personnel and a brief summary of each person's qualifications. The curriculum shall include, but not be limited to, four academic years' instruction in the following subjects:

(1) Anatomy

(a) Embryology

(b) Histology

(c) Neuro-anatomy

(2) Physiology and Chemistry

(3) Pathology and Bacteriology

(4) Diagnosis

(a) Physical

(b) Differential

(c) Laboratory

(e) That suitable buildings provided with laboratories equipped for instruction in anatomy, chemistry, physiology, pathology, bacteriology and other areas of learning necessary to the due course of study prescribed by these rules; and that a laboratory equipped with supplies, models, manikins, charts, stereopticon, roentgen-ray and other special apparatus used in teaching the system to treat human ailments without the use of medicine and operative surgery, be provided.

(f) That a working library, easily accessible to students, is maintained from at least 9 a.m. to 5 p.m., with a librarian in constant attendance. The library shall contain a standard medical dictionary, the modern text and reference books, and the files of leading periodicals dealing with the particular system of treating human ailments without the use of medicine and operative surgery.

(g) That the college or institution requires all students to furnish, before matriculation, satisfactory proof of the preliminary education required by the Medical Practice Act.

(h) That full and complete records are kept showing the credentials for admission, attendance, grades and financial accounts of each student.

(i) That admission of transfer students will be limited to honorably dismissed students from another approved college or institution teaching the same system. The transcript of record obtained directly from the transferring school shall be kept on file. It shall be the duty of a college or institution to furnish such a transcript for the benefit of each student subject to honorable dismissal. No credit shall be given a transferred student for final or "senior year" work or for any courses taken by correspondence.

(j) That students shall start class attendance within one week of the start of each session. That credit for completion of a course will not be granted a student who failed to attend 80 per cent of the complete session of the course.

RULE III—HOSPITALS APPROVED FOR INTERNSHIP.

1. A hospital shall, in the judgment of the Department be deemed reputable and in good standing for training interns and intern services when it meets the following standards:

(a) General hospital of 150 beds' capacity, with an average of at least 60 patients daily, with rotating service.

(b) Shall contain at least the departments of internal medicine, surgery, obstetrics and pediatrics; and an organized departmentalized staff, holding meetings monthly for case reviews and study.

(c) Laboratory employing a full-time qualified technician and at least a part-time qualified pathologist, visiting the laboratory at least two days per week.

(d) Radiological department employing a qualified X-ray technician and at least a part-time qualified roentgenologist, visiting the department at least two days per week.

(e) Maintenance of an up-to-date medical library located in a suitable study room available to interns.

(f) Such hospital shall provide and furnish the Department with the names of staff members of the various departments of the hospital.

(g) The hospital, upon the completion of a course of training therein of not less than twelve months, shall issue its certificate therefor to any such intern or at the request of the Department, such certificate shall include therein, by date, the commencement and the conclusion thereof.

2. An approved internship shall consist of a twelve months' rotating service in medicine, surgery, obstetrics and pediatrics, with an election in medical specialties.

In the event an applicant has received training in excess of the twelve months' period specified by the Medical Practice Act, and if this be in an institu-

tion approved by the Department as adequate for specialty training; and if the applicant has received certification by a recognized Medical Specialty Board, and has had two or more years' specialty practice or Military Service; such training and practice may be accepted as the equivalent of a rotating internship.

Any applicant who shall have completed twelve months of clinical training in a hospital, as required by Section 5-1(b) of the Medical Practice Act, and who has been accepted for further training in a specialty or general practice residency program by a hospital or institution approved by the Department for that purpose, shall be deemed to have complied with the requirements of this rule and of the Medical Practice Act in this regard.

RULE IV—APPLICATION FOR EXAMINATION

An applicant for examination for licensure to practice medicine in all of its branches, or any system of treating human ailments without the use of drugs or medicine and without operative surgery, must make application on forms furnished by the Department at least fifteen days prior to the examination and present, in addition:

(a) Recommendations from two Illinois licentiates, or if recommendations are from non-resident practitioners, they must be countersigned by Illinois licentiates who know the original signers.

(b) A recent photograph, passport size, signed by applicant and the two persons licensed to practice the system of treatment of human ailments for which the applicant is seeking a license. A duplicate photograph must be presented with the card of admission at the examination.

(c) The original diploma of graduation from the professional college in which the applicant completed his course of training, or, in lieu of presenting the diploma with the application, the applicant may present it at the examination.

(d) A certified copy of secondary school and professional school studies to be mailed direct to the Department by the schools attended or by the professional schools where the applicant completed the required course of study.

(e) Proof of completion of a rotating internship of twelve months in an approved hospital for applicants seeking admission to examination for license to practice medicine in all of its branches; and, in the case of graduates of medical colleges in countries other than the United States and Canada, who apply for examination after January 1, 1953, proof of rotating internships of one year in approved hospitals in the State of Illinois.

A candidate under Section 5, paragraph 1-b or Section 13 may apply for the examination or clinical test and take the examination given immediately prior to completion of his internship provided he furnishes a statement from

the hospital authorities stating his internship has been satisfactory to date. The results of the examination will be withheld and no license will be issued until the Department receives proof of satisfactory completion of the required internship in an approved hospital training program.

(f) Applicants who completed their medical courses in the extramural colleges of Ireland and Scotland shall not be eligible for admission to examinations for licensure under the Illinois Medical Practice Act.

(g) Graduates of European medical colleges or universities after January 1, 1943, with the exception of certain approved colleges in the British Isles, Denmark, Holland, Norway, Sweden and Switzerland, be not accepted for admission to examinations for licensure under the Illinois Medical Practice Act.

Graduates of such European medical colleges after January 1, 1943 may be considered for admission to Illinois examinations provided they present diplomas of graduation from approved medical colleges in the United States after attendance in such colleges for at least one year; and in addition, have served rotating internships of one year in approved hospitals in the United States.

(h) An applicant who presented a diploma of graduation from an approved school will not be accepted if he was accorded advanced standing in such school based upon his prior education in an unapproved school.

RULE V—EXAMINATIONS

1. Examinations for licensure to practice medicine in all of its branches shall be conducted in the English language and shall be in the following theoretical and practical areas of medicine:

Theoretical

Chemistry, Physiology, Anatomy, Pharmacology, Pathology, Bacteriology, Medicine, Public Health and Preventive Medicine, Obstetrics and Gynecology, Surgery, Pediatrics, and Psychiatry

Clinical

General Practice of Medicine

2. Examinations for licensure to practice the treatment of human ailments without the use of drugs or medicine and without operative surgery shall be conducted in the English language and shall be in the following subjects:

Theoretical

Chemistry & Physiology, Anatomy & Histology, Pathology & Bacteriology, Diagnosis, Hygiene & Medical Jurisprudence, Eye, Ear, Nose & Throat, Dermatology, Pediatrics & Neurology, System of Practice, Obstetrics (for graduates of approved osteopathic colleges)

Practical

System of Practice

3. To be successful, applicants must receive general averages of 75% with no grade below 60 in the

written examination, and a general average of 75% in the clinical or practical test.

Applicants applying for registration under Sections 12 and 12a of the Medical Practice Act be required to make general averages of 75% in the three subjects required for license to practice medicine and surgery in Illinois.

4. In case of failure in the first and second examinations applicants will be allowed credit on the following examination for all grades of 75% or more; but in case of failure in the third examination they must retake all written subjects at each subsequent examination. It is not required that the clinical or practical part of the examination be repeated after a passing grade of 75% has been received in that part of the examination.

5. Applicants who take the regular written examination conducted by the Department for licenses as Physicians and Surgeons be excused from taking the clinical test.

6. An applicant for registration as Physician and Surgeon who has been unsuccessful in five examinations will be deemed to be eligible for further examination upon receipt of proof that he has completed one year of residency training in an approved hospital training program in the United States received subsequent to the applicant's fifth failure.

7. An applicant who has been unsuccessful in five examinations for registration as a drugless practitioner will be eligible for reexamination upon receipt of proof that he has completed a course of study of 960 hours in a school which is accredited under the Medical Practice Act. This course must be received subsequent to applicant's fifth failure.

8. An applicant who furnished proof of a course of study of 240 hours in a school of chiropractic recognized by the Department in order to be eligible for further examination under Section 9a of the Medical Practice Act will be considered as a new applicant and his grades of 75 per cent or more will be carried over to the second and third examination.

RULE VI—RECIPROCITY

1. Each applicant for registration through reciprocity, either for the practice of medicine in all of its branches or for the treatment of human ailments without the use of drugs or medicine and without operative surgery, filed on forms provided by the Department, will be considered on its individual merits, provided the state or territory of original licensure grants a like privilege to persons licensed in Illinois.

2. If the application is not endorsed by officers of a state or county society it must be endorsed by two physicians duly licensed to practice in some state in the United States.

3. Applicants for licensure through reciprocity or upon the basis of having passed the National Board Examination must pass a clinical test. If the applicant passed Part III of the National

Board prior to January 1, 1964, he is required to pass the clinical test conducted by this Department. Applicants on the basis of National Board Examination who completed Part III after January 1, 1964, are required to report for an interview with the Medical Examining Committee.

4. Graduates of chiropractic colleges whose applications for registration in Illinois by reciprocity are approved, shall be required to pass a written examination in theory in addition to a practical test before the chiropractic examiner.

RULE VII—LICENSURE

1. An examinee who successfully completes his medical examination must secure his certificate of licensure within one year from the date of his examination.

2. The Department will not issue a duplicate certificate of registration to practice medicine in all of its branches, or to treat human ailments without the use of drugs or medicine and without operative surgery, unless proof satisfactory to the Department and Committee is presented that the original certificate was destroyed; or in case of change of name when the original certificate is returned for cancellation, together with satisfactory legal proof of such change of name.

3. A license to practice medicine in Illinois shall be a requisite for a residency in an Illinois hospital.

RULE VIII—TEMPORARY CERTIFICATES OF REGISTRATION

1. Any person not licensed to practice medicine in all of its branches in the State of Illinois who wishes to pursue a program of graduate or specialty or residency training in this State, must be the holder of a Temporary Certificate of Registration issued by the Department under the provisions of Section 11a of the Medical Practice Act of Illinois and in accordance with provisions of within Rules.

2. Application for a Temporary Certificate must be made on blank forms prepared and furnished by the Department. It must be submitted to the Department together with evidence satisfactory to the Department that applicant meets the requirements of Section 11a of the Illinois Medical Practice Act and that if his application is approved he will be accepted or appointed for residency training in the hospital designated in such application.

3. A Temporary Certificate of Registration will be issued on behalf of an otherwise qualified applicant only for residency or specialty training in a hospital situated in this State which is approved by the Department for the purpose of such training. An approved hospital is one which in the judgment of the Department is qualified to offer such training, and which shall comply with the within Rules.

4. Written notice of the Department's final action on every application for a Temporary Certificate of Registration shall be given to the applicant and the hospital designated therein; when such application is approved the Temporary Certificate of

Registration shall be delivered or mailed to the hospital designated therein and shall be kept in the care and custody of such hospital. The applicant shall not commence such specialty or residency training before he or the hospital receives written notification of approval of his application.

5. A Temporary Certificate of Registration shall not be valid for longer than one year after issuance thereof and may be renewed from time to time, in the discretion of the Department, for a period of not more than one year each time. Application for renewal must be made on forms prepared and furnished by the Department and the Temporary Certificate of Registration sought to be renewed must be submitted therewith to the Department.

6. When any person in whose behalf a Temporary Certificate of Registration has been issued shall be discharged or shall terminate his specialty or residency training in the hospital designated therein, such hospital shall immediately deliver or mail by registered mail to the Department his Temporary Certificate of Registration and written notice of the reason for return of same.

7. A Temporary Certificate of Registration is not transferable without prior notice to and approval by the Department. If the holder of a Temporary Certificate of Registration wishes to change to another training program in the approved hospital designated therein, or he wishes to enter a training program in another approved hospital, he must make application on Forms furnished by the Department. His current Temporary Certificate of Registration must accompany such application and he cannot thereafter continue in the training program designated on such current Certificate, and he may not commence such other training program until a Temporary Certificate of Registration has been issued, therefor.

8. Not more than one Temporary Certificate of Registration shall be issued to any person for the same period of time. A person on whose behalf a Temporary Certificate of Registration has been issued is limited in the practice of medicine to the performing of such acts as may be prescribed by and incidental to his program of residency training in the hospital designated in his Temporary Cer-

tificate of Registration, and he cannot otherwise engage in the practice of medicine in the State of Illinois.

9. Whenever, under the within Rules, a hospital is required to deliver or return a Temporary Certificate of Registration to the Department, in case, because of the loss or destruction of such Certificate, or for any other reason, such hospital shall be unable immediately so to deliver or mail such Certificate, such hospital shall immediately mail or deliver to the Department a written explanation in detail of such inability.

10. The Department shall not accept any application for a Temporary Certificate of Registration on behalf of an applicant who has a pending application on file to take the Department examination for a license to practice medicine in all its branches in the State of Illinois, or an applicant who has previously taken and failed such Department examination.

11. The holder of a Temporary Certificate of Registration is not barred thereby from becoming eligible for admission to the Department examination for a license to practice medicine in Illinois if he otherwise meets the requirements for admission to such examination and if such person should fail to pass such examination such failure shall not bar him from completing his training program; provided, that if such person shall leave or terminate his training program, this foregoing Rule 10 shall apply and he shall not thereafter be eligible for another Temporary Certificate of Registration.

RULE IX—LIMITED LICENSES TO PRACTICE IN STATE HOSPITALS

1. Each application made on forms provided by the Department will be considered on its own merits.

2. The State Hospital at which the applicant will practice under the supervision of a medical officer, shall signify to the Department that the hospital will appoint the applicant in the event he received a Limited License.

3. Any applicant for a Limited License who has failed in more than three examinations for licensure under the Illinois Medical Practice Act shall not be eligible for a Limited License.

DEPARTMENT OF MENTAL HEALTH

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Raymond E. Robertson, M.D., Special Assistant
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Carl J. Baker, Administrator, Individual Care Grants

Institutions

A. L. Bowen Children's Center, A. J. Shafter, Ph.D., Superintendent
Dixon State School, David Edelson, Superintendent
William W. Fox Children's Center, Thomas P. Crane, M.D., Superintendent
Lincoln State School, Louis Belinson, M.D., Superintendent
Warren G. Murray Children's Center, Sol S. Silverman, Ph.D., Superintendent

Division of Professional Services

Abel G. Ossorio, Ph.D., Acting Division Director
Myrna B. Kassel, Ph.D., Assistant Division Director (Training)
Mrs. Annette Calloway, Chief, Psychiatric Social Work
Thomas J. Clark, Chief, Activity Therapy Services
Lucy Fairbank, Assistant Chief, Activity Therapy Services
Paul F. Cole, Supervising Pharmacist
Ira D. Cravens, Chief, Veterans' Services
Paul Hletko, M.D., Chief, Medical Services—Forensic Psychiatry
A. A. Kaluzny, M.D., Tuberculosis Control
C. P. Maculoso, Chief, Clinical Laboratories
Arthur L. Magill, M.D., C.M., Medical Standards & Hospital Accreditation

Mrs. Louis A. Meyer, R.N., Assistant Chief, Nursing Service
Abel Ossorio, Ph.D., Chief, Psychology Service
Miss Jane Phillips, Chief, Volunteer Services
Rudyard Propst, Chief, Rehabilitation Services
George Melhus, Assistant Chief, Rehabilitation Services
Paul A. Rittmanic, Ph.D., Chief, Speech and Hearing Services
Lyman Samo, Chief, Special Education Services
Gregory A. Santoyo, M.D., Acting Chief, Public Health Services

Division of Comprehensive Mental Health Services

Zones

ROCKFORD: Norris Hansell, M.D., Zone Director
H. Douglas Singer Zone Center, 4402 North Main St., Rockford
CHICAGO (North): Arthur Woloshin, M.D., Zone Director
Charles F. Read Zone Center, 4200 N. Oak Park Ave., Chicago
CHICAGO (South): Bernard Rubin, M.D., Zone Director
John J. Madden Zone Center, Hines
PEORIA: Thomas T. Tourlentes, M.D., Zone Director
George A. Zeller Zone Center, 43227 N. University St., Peoria
SPRINGFIELD:
Andrew McFarland Zone Center, R.R. 4, Springfield
DECATUR-CHAMPAIGN: Lewis Kurke, M.D., Zone Director
Adolf Meyer Zone Center, R.R. 1, Decatur
Herman M. Adler Zone Center, S. First St., R.R. 2, Champaign
CARBONDALE: Robert C. Steck, M.D., Zone Director
Anna State Hospital, Anna

Hospitals and Clinics

Alton State Hospital, Abraham Simon, M.D., Superintendent
Anna State Hospital, Ivan Pavkovic, M.D., Superintendent
Chicago Mental Health Center, Kalman Gyarfas, M.D., Superintendent
Chicago State Hospital, Hyman C. Pomp, Ph.D., Acting Superintendent
East Moline State Hospital, Konstantin Dimitri, M.D., Superintendent
Elgin State Hospital, Ernest S. Klein, M.D., Superintendent
Galesburg State Research Hospital, Thomas T. Tourlentes, M.D., Superintendent
Illinois Security Hospital, Bert Rednour, Superintendent
Jacksonville State Hospital, Stephen H. Pratt, Ph.D., Superintendent

Kankakee State Hospital, Gabriel Misevic, M.D.,
Superintendent
Manteno State Hospital, Richard J. Graff, M.D.,
Superintendent
Peoria State Hospital, Henry D. Staras, M.D.,
Superintendent
Tinley Park State Hospital, Helen Newman, M.D.,
Acting Superintendent

Community Services

Charles R. Meeker, Chief
B. W. Tucker, Chief, Mental Health Education
John Meyer, Assistant Chief, Mental Health
Education
Joseph B. Lehmann, Consultant, Community Mental
Health Clinics

Interstate Services

Muriel Rietz, Chief

Alcoholism Programs

Richard S. Cook, M.D., Chief
William Becker, Assistant Chief
Howard W. Wolff, Warren Clinic
Peoria State Hospital, Intensive Treatment Unit

Medical Center Complex

Institute for Juvenile Research

John E. Halasz, M.D., Acting Director
Noel Jenkin, Ph.D., Director of Research
Downtown Research Branch
William Healy School

Illinois State Pediatric Institute

Herbert J. Grossman, M.D., Director
H. David Mosier, M.D., Director of Research

Illinois State Psychiatric Institute

Lester H. Rudy, M.D., Director
Robert C. Drye, M.D., Director of Education

Division of Research Services

Percival Bailey, M.D., Division Director
Benjamin Pasamanick, M.D., Associate Division Di-
rector
Leon H. White, Administrator

Division of Personnel Services

Don O'Donnell, Division Director
Leslie T. Thornton, Assistant Division Director
(Operations)
David Jenkins, Assistant Division Director (Pro-
grams)

Division of General Services

Robert H. Sipes, Division Director
Joseph L. McGrath, Deputy Director, Physical Plant
Services
E. F. Merten, Deputy Director, Administrative
Services
Frank F. Campbell, Deputy Director, Reimburse-
ment Service

Statutory Boards

1. Board of Mental Health Commissioners

Alex Elson, Chicago, Chairman
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Mrs. James Holland, Rockford
Willard King, Chicago
Rabbi Ralph Simon, Chicago
Curtis Small, Harrisburg
John Adam Zvetina, Chicago
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Secretary

2. Psychiatric Training and Research Authority

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Peter J. Talso, M.D., Chicago
Ex-Officio—Harold M. Visotsky, M.D., Director of
Mental Health; Alex Elson, Chairman, Board of
Mental Health Commissioners; Herbert J. Gross-
man, M.D., Director Illinois State Pediatric Insti-
tute; Lester H. Rudy, M.D., Director, Illinois
State Psychiatric Institute
Percival Bailey, M.D., Chicago, Executive Secretary

Statutory Board Administrative Appointment

Psychiatric Advisory Council

Benjamin Boshes, M.D., Evanston, Chairman
H. H. Garner, M.D., Chicago, Vice Chairman
Robert Daniels, M.D., Chicago
Roy R. Grinker, M.D., Chicago
Gerhart Piers, M.D., Chicago
Melvin Sabshin, M.D., Chicago
Ex-Officio—Harold M. Visotsky, M.D., Director of
Mental Health
Percival Bailey, M.D., Chicago, Executive Secretary

Advisory Committee Administrative Appointment

1. Advisory Board to Division of Alcoholism

Marvin F. Burt, Freeport, Chairman
Paul B. Musgrove, Peoria, Secretary
J. Milton Guy, Chicago
Paul Hletko, M.D., Chicago
George E. Moredock, Jr., Chicago
James H. Oughton, Jr., Dwight
Guy A. Renzaglia, Carbondale
Jackson A. Smith, M.D., Chicago

2. Committee on Chest Diseases

Edward A. Piszezsek, M.D., Hinsdale, Chairman
William Adams, M.D., Chicago
Kenneth G. Bulley, M.D., Aurora
Clifton Hall, M.D., Springfield
Roger A. Harvey, M.D., Chicago
William Lees, M.D., Chicago
Dan Morse, M.D., Peoria

Herman C. Rogers, M.D., Mt. Vernon
Darrell H. Trumpe, M.D., Springfield
George C. Turner, M.D., Chicago
Ex-Officio—Harold M. Visotsky, M.D., Director of
Mental Health; A. A. Kaluzny, M.D., Tuberculosis
Control, Department of Mental Health

3. Advisory Committee on Grants to Local Communities for Mental Health Services

Mrs. Bernice T. Van der Vries, Evanston, Chairman
Rt. Rev. Msgr. William J. Cassin, Springfield
O. M. Chute, Ed.D., Evanston
Louis deBoer, Chicago
Robert L. Farwell, Chicago
Vernon F. Frazee, Springfield
The Very Rev. Gordon E. Gillett, Peoria
Rabbi Joseph L. Ginsberg, Highland Park
Donaldson F. Rawlings, M.D., Springfield
Mrs. H. Langdon Robinson, Springfield
Groves B. Smith, M.D., Alton

4. Institute for Juvenile Research Advisory Council

Val Cox, Collinsville, Chairman
Mrs. James Errant, Elgin, Vice Chairman
John J. Bresee, Champaign
Rt. Rev. Msgr. William J. Cassin, Springfield
Rep. Frances L. Dawson, Evanston
James Doores, M.D., Galesburg
Mrs. Grace Duff, Cairo
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Robert Fielding, M.D., Chicago
Miss Connie Fish, Chicago
The Very Rev. Gordon E. Gillett, Peoria
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Mrs. Chandler Miller, Rockford
Miss Frances A. Mullen, Chicago
Milo Pritchett, East St. Louis
Lawrence K. Schnadig, Highland Park
Norman C. Sleezer, Freeport
Lloyd G. Wheeler, Chicago

DEPARTMENT OF PUBLIC HEALTH

503 State Office Bldg., Springfield 62706

Franklin D. Yoder, M.D., M.P.H., Director
E. L. Wittenborn, M.P.H., Assistant to the Director
Edward Press, M.D., M.P.H., Medical Assistant to
the Director

Division of General Administration

E. L. Wittenborn, Chief

Bureaus of:

Administration—E. L. Wittenborn, Chief
Accounting and Finance—R. T. Malone, Chief
Health Education—Lynford L. Keyes, Chief
Francis Paris, Associate Chief, Consultation
Services
John Morrison, Associate Chief, Information
Services
Nursing—Pearl H. Ahrenkiel, Chief
Grace Musselman, Assistant Chief
Margaret Ahern, Nursing Consultant
Margaret Ranek, Consultant Nurse
Mildred Moore, Occupational Nursing
Statistics—E. L. Wittenborn, Acting Chief
Don D. Vance, Administrative Officer
Leo A. Ozier, Deputy State Registrar
Clyde A. Bridger, Chief Statistician
Isabelle Crawford, Data Processing Supervisor

Chicago Offices:

Edward Press, Medical Assistant to the Director
Suite 1827, 160 N. LaSalle St., Chicago 60601
Benn J. Leland, Division of Sanitary Engineering
1919 W. Taylor St., Chicago 60612
Mildred Moore, R.N., Occupational Nursing
1919 W. Taylor St., Chicago 60612

Division of Dental Health

Carl L. Sebelius, Chief
John D. Thorpe, Coordinator of Continuing
Education
Laurent D. Catudal, Dental Consultant

Division of Foods and Dairies

Edward Press, Acting Chief
James Burke, Assistant Chief

Division of Hospitals and Chronic Illness

R. F. Sondag, M.D., M.P.H., Chief

Bureaus of:

CHRONIC ILLNESS AND MEDICARE

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Edith Heide, Nursing Consultant in Chronic
Diseases
Leone Pazourek, Chief Nutrition Consultant
Pearl Alexander, Physical Therapist Consultant
Heart Disease Control Section—R. F. Sondag,
Chief; Joseph A. Amoroso, Public Health
Advisor
Cancer Control Section—R. F. Sondag, Chief

GERIATRICS

R. F. Sondag, Chief
Nursing Home Section—R. R. Cunningham,
Head; Jack Wilson, Assistant Head; Donald
C. Jardine, Architect; Margene Nordstrom,
Geriatric and Chronic Illness Consultant

HOSPITALS

George A. Lindsley, Chief
Hospital and Medical Facilities Survey and
Construction Program—George A. Lindsley;
Aden H. Clump, Assistant
Hospital Licensing Program—Harold E. Jose-
hart, Hospital Licensing Administrator
Hospital Accounts Analyst Service—Robert
J. McMahon

Hospital Maternity Study Program—Alice S. Flesch

Civil Defense Emergency Hospital Program—Robert F. Heggie

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Enos G. Huffer, Chief

Paul N. Hanger, Supervisor of Grade A Production

Grover C. Papp, Supervisor of Common Carriers of Grade A Products

Roy Fairbanks, Supervisor of I.M.S. Program

Division of Laboratories

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Richard A. Morrissey, Assistant Chief

Bureaus of:

Biologic Products—John Neal, Chief

Diagnostic Services—Mary Louise Brown, Chief
Laboratory Evaluation—Herbert E. McDaniels, Chief

Sanitary Bacteriology—J. C. McCaffrey, Chief

Toxicology—Frank F. Fiorese, Chief

Virus Diseases and Research—Richard Morrissey, Chief

Laboratories:

Main Laboratory

Kirby Henkes

134 N. Ninth St., Springfield 62706

Springfield Sanitary Bacteriology Laboratory

Robert M. Scott

6th Floor, Capitol Bldg., Springfield

Carbondale Laboratory

Nathan Nagle

Oakland & Chautauqua Sts., Carbondale

Champaign Laboratory

Viola M. Michael

505 S. Fifth St., Champaign

Chicago Laboratory

George F. Forster

1800 W. Fillmore St., Chicago

East St. Louis Laboratory

Charles S. Puntney

414 Missouri Ave., East St. Louis

Rock Island Laboratory

Bettie Anne Muffley

121 Fourth Ave., Rock Island

Division of Preventive Medicine

D. F. Rawlings, M.D., M.P.H., Chief

Norman J. Rose, M.D., M.P.H., Assistant Chief

Bureaus of:

Epidemiology—Norman J. Rose, Chief

Section on Veterinary Public Health—Paul R. Schnurrenberger, Chief Public Health Veterinarian

Vaccination Assistance Project—Milton W.

Dedek, Project Coordinator

Hazardous Substances and Poison Control—Norman J. Rose, Chief

Maternal and Child Health—D. F. Rawlings, Chief

John H. Rendok, Consultant in Maternity

Ethel G. Chapman, Consultant Nurse in Maternal and Child Health

Vida B. Sloan, Consultant Nurse in Maternal and Child Health

Faye Paris, Nutrition Consultant

Iva Aukes, Social Service Consultant

Migrant Health Section—David E. Knox, Chief
Heritable and Metabolic Diseases Program—

William J. Dewey, Chief

School Health—D. F. Rawlings, Chief

Caroline Austin, Vision Conservation Coordinator

Raymond J. Bernero, Hearing Conservation Coordinator

Helen H. Natwick, Consultant Nurse

Division of Sanitary Engineering

Clarence W. Klassen, Chief

Verdun Randolph, Assistant Chief

R. S. Nelle, Water Resources Engineer

Bureaus of:

General Sanitation—O. S. Hallden, Chief

Public Water Supplies—William J. Downer, Chief

Radiological Health—Verdun R. Randolph, Acting Chief

Air Pollution Control—Robert R. French

Special Services—Eugene S. Clark, Chief

Stream Pollution—D. B. Morton

Chicago Office—Sanitary Water Board

Benn J. Leland, Engineer-in-Charge

Division of Tuberculosis Control

Clifton Hall, M.D., M.P.H., Chief

Chicago State Tuberculosis Sanitarium

Herbert Neuhaus, M.D., Medical Director and Superintendent

Mt. Vernon State Tuberculosis Sanitarium

Herman C. Rogers, M.D., Medical Director and Superintendent

Division of Local Health Services

Charles F. Sutton, M.D., M.P.H., Chief

Claire E. Healey, M.D., M.P.H., Assistant Chief

E. E. Diddams, M.S.P.H., Executive Assistant

Sections on:

Civil Defense—Robert F. Heggie, Civil Defense Health Advisor; Mary O'Donnell, Medical Self-Help Training

Community Health Services Promotion—

Harold K. Fuller, Head

Illinois Statewide Public Health Committee—

Harold K. Fuller, Executive Secretary

Regional Offices

Northeastern Region (I)—Ruth L. Wiener, R.N., M.P.H. (Acting), 48 W. Galena Blvd., Aurora 60504. Counties of Boone, DeKalb, Grundy, Kane, Kankakee, Kendall, LaSalle, and McHenry and consultation to full-time health departments of Cook, DuPage, Lake, Will and Winnebago Counties; Berwyn Township Public Health District, Evanston—North Shore, Rockford, Oak

Park, Hygienic Institute of LaSalle-Oglesby-Peru, and Stickney Township Public Health District
 East Central Region (II)—Huston J. Banton, M.D., M.P.H., 301 W. Birch St., Champaign 61820. Counties of Champaign, Clark, Coles, Crawford, Cumberland, Douglas, Edgar, Ford, Iroquois, Jasper, Livingston, Moultrie, and Vermilion counties and consultation to full-time health departments of DeWitt-Piatt, Effingham, McLean, and Shelby counties, and to the Champaign-Urbana Public Health District

Northwestern Region (III)—W. Keith Weeber, (Acting), 121 Fourth Ave., Rock Island 61201. Counties of Bureau, Carroll, Hancock, Henderson, Henry, Knox, Marshall, McDonough, Mercer, Ogle, Putnam, Rock Island, Stark, Stephenson, Tazewell, Warren, Whiteside, and Woodford and consultation to full-time health departments of Jo Daviess, Lee, and Peoria counties and to the city of Peoria

West Central Region (IV)—W. M. Talbert, M.D., M.S.P.H., 1124 S. Fifth St., Springfield 62706. Counties of Bond, Brown, Calhoun, Cass, Christian, Clinton, Fayette, Greene, Jersey, Logan, Macoupin, Madison, Mason, Menard, Pike, St. Clair, Sangamon, Schuyler, and Scott and consultation to full-time health departments of Adams, Fulton, Macon, Montgomery, and Morgan counties, and the East Side Health District of Canteen-Centreville-East St. Louis-Stites townships.

Southern Region (V)—Elvin L. Sederlin, M.D., P.O. Box 722, Carbondale 62901. Counties of Clay, Edwards, Hamilton, Jefferson, Marion, Monroe, Perry, Randolph, Richland, Wabash, Washington, and Wayne and consultation to full-time health departments of Gallatin-Saline-White, Franklin-Williamson, Jackson, Lawrence, Hardin-Johnson-Massac-Pope, and Alexander-Pulaski-Union counties.

County and Multiple-County Health Departments

Adams County, Wayne Messick, M.P.H., 333 N. 6th, Quincy 62301
 Cook County, John B. Hall, M.D., M.P.H., 1425 S. Racine Ave., Chicago 60608
 North District, 1755 Oakton St., DesPlaines 60018
 South District, 51 E. 154th St., Harvey 60426
 Southwest District, 5410 W. 95th St., Oak Lawn 60453
 West District, 1907-09 Rice St., Melrose Park 60160
 DeWitt-Piatt Bi-County, Lelia V. Hyde, R.N., 122 E. Main St., Clinton 61727
 Piatt County, Courthouse, Monticello 61856
 DuPage County, Charles A. Lang, M.D., M.P.H., 222 E. Willow Ave., Wheaton 60187
 Effingham County, Peter C. Supan, M.D., M.P.H., 112 E. Section Ave., Effingham 62401
 Egypton (Gallatin-Saline-White Counties) Ann E. Clarke, M.D., 1333 Locust St., Eldorado 62930

White County, 110 E. Robinson, Carmi 62821
 Gallatin County, Courthouse, Shawneetown 62984
 Franklin-Williamson Bi-County, David P. Richerson, M.D., M.P.H., 217 E. Broadway, Johnston City 62951

Franklin County, 226 N. Main, Benton 62812
 Fulton County, Wilma Sturgeon, R.N., 31 S. Main St., Canton 61520

Jackson County, Harold H. Rohrer, M.D., M.P.H., 1015½ Chestnut St., Murphysboro 62966

Jo Daviess County, Albert L. Hildinger, M.D., 311 S. Main St., Galena 61036

Lake County, Arthur G. Baker, M.D., M.P.H., 2307 Grand Ave., Waukegan 60085

West Suboffice, 330 N. Milwaukee Ave., Libertyville 60048

Lawrence County, Maxine Jackman, R.N., Courthouse, Lawrenceville 62439

Lee County, Robert C. Miles, D.D.S., M.P.H., 316 W. Third St., Dixon 61021

Macon County, Leo Michl, Jr., 1085 S. Main St., Decatur 62521

McLean County, Joseph E. Beasley, M.D., M.P.H., 401 W. Virginia Ave., Normal 61761

Montgomery County, Willis L. Whitlock, Box 149, Hillsboro 62049

Morgan County, Rosario T. Sison, M.D., 234½ W. State St., Jacksonville 62650

Peoria County, Fred Long, M.D., M.P.H., 2114 N. Sheridan Rd., Peoria 61604

Quadri-County

(Hardin-Johnson-Massac-Pope Counties), Larry R. Mittendorf, D.D.S., Box 437, Goleonda 62938

Massac County, Courthouse, Metropolis 62960

Johnson County, Vienna 62995

Hardin County, Gross Bldg., Elizabethtown 62931

Shelby County, Peter C. Supan, M.D., M.P.H., 123

N. Broadway, Shelbyville 62565

Tri-County

(Alexander-Pulaski-Union Counties), Genevieve Hillerman, R.N., 1115 Cedar St., Cairo 62914

Union County, Jonesboro 62952

Will County, Herbert S. Miller, M.D., M.P.H., 21 E. Van Buren St., Joliet 60431

Winnebago County, Arthur E. Sulek, M.D., M.I.H., Room 106, Court House Bldg., Rockford 61101

Urban Health Departments

Berwyn Health Department, Henry S. Swiontek, M.D., 6600 W. 26th St., Berwyn, 60402

Champaign-Urbana Public Health District, L. L. Fatherree, M.D., M.P.H., 505 S. Fifth St., Champaign 61820

Chicago Board of Health, Samuel L. Andelman, M.D., M.P.H., Chicago Civic Center, Chicago 60602

East Side Health District (Canteen-Centreville-East St. Louis-Stites Townships), John J. Gregowicz, M.D., 638 N. 20th St., East St. Louis 62205

Evanston-North Shore Health Department, Allan A. Filek, M.D., M.S.P.H., Box 870, Evanston 60204

Hygienic Institute (LaSalle-Oglesby-Peru), Arlington Ailes, M.D., M.P.H., LaSalle 61301
 Oak Park Department of Public Health, Herbert Ratner, M.D., Box 31, Oak Park 60303
 Peoria Department of Health, Fred Long, M.D., M.P.H., 2116 N. Sheridan Rd., Peoria 61604
 Rockford Department of Public Health, Arthur E. Sulek, M.D., M.I.H., City Hall Bldg., Rockford 61104
 Stickney Township Public Health District, Gene J. Franchi, D.D.S., M.P.H., 5635 State Rd., Oak Lawn 60459

POISON CONTROL CENTERS IN ILLINOIS

AURORA

Copley Memorial Hospital, Lincoln and Western Aves.

St. Charles Hospital, 400 New York St.

BELLEVILLE

Memorial Hospital, 4501 North Park Dr.

BERWYN

MacNeal Memorial Hospital, 3249 S. Oak Park Ave.

BLOOMINGTON

Mennonite Hospital, 807 N. Main St.

St. Joseph's Hospital, 824 W. Jackson St.

CAIRO

St. Mary's Hospital, 2020 Cedar St.

CANTON

Graham Hospital Association, 210 W. Walnut St.

CARBONDALE

Doctors Hospital, 404 W. Main St.

CHAMPAIGN

Burnham City Hospital, 311 E. Stoughton St.

CHESTER

Memorial Hospital, 1900 State St.

CHICAGO

Master Chicago Center—Presbyterian-St. Luke's Hospital, 1753 W. Congress St.

Bob Roberts Memorial Hospital, 920 E. 59th St.

Children's Memorial Hospital, 707 W. Fullerton Ave.

Cook County Hospital, 1825 W. Harrison St.

Illinois Research Hospital, 840 S. Wood St.

Mercy Hospital, 2537 S. Prairie Ave.

Michael Reese Hospital, 29th St. and Ellis Ave.

Mt. Sinai Hospital, 15th and California Sts.

Municipal Contagious Disease, 3026 S. California Ave.

Resurrection Hospital, 7435 W. Talcott Ave.

DANVILLE

Lake View Memorial Hospital, 812 N. Logan Ave.

St. Elizabeth's Hospital, 600 Sager St.

DECATUR

Decatur-Macon County Hospital, 2300 N. Edward St.

St. Mary's Hospital, 1800 E. Lake Shore Dr.

DES PLAINES

Holy Family Hospital, 100 N. River Rd.

EAST ST. LOUIS

Christian Welfare Hospital, 1509 Illinois Ave.

St. Mary's Hospital, 129 N. 8th St.

EFFINGHAM

St. Anthony's Hospital, 503 N. Maple St.

ELGIN

St. Joseph's Hospital, 277 Jefferson Ave.

Sherman Hospital, 934 Center St.

ELMHURST

Memorial Hospital of DuPage County, 315 Schiller St.

EVANSTON

Community Hospital, 2040 Brown Ave.

Evanston Hospital, 2650 Ridge Ave.

St. Francis Hospital, 355 Ridge Ave.

EVERGREEN PARK

Little Company of Mary Hospital, 2800 W. 95th St.

FAIRBURY

Fairbury Hospital, 519 S. Fifth St.

FREEPORT

Freeport Memorial Hospital, 420 S. Harlem Ave.

GALENA

Northwestern Illinois Community Hospital, Summit St.

GALESBURG

Galesburg Cottage Hospital, 674 N. Seminary St.

St. Mary's Hospital, 239 S. Cherry St.

GRANITE CITY

St. Elizabeth's Hospital, 2100 Madison Ave.

HARVEY

Ingalls Memorial Hospital, 15510 Page Ave.

HIGHLAND PARK

Highland Park Hospital Foundation, 718 Glenview Ave.

HINSDALE

Hinsdale San. & Hospital, 120 N. Oak St.

HOOPESTON

Hoopeston Community Memorial Hospital, 701 E. Orange St.

JACKSONVILLE

Passavant Memorial Area Hospital, 1600 W. Walnut St.

JOLIET

St. Joseph's Hospital, 333 Madison St.

Silver Cross Hospital, 600 Walnut St.

KANKAKEE

St. Mary's Hospital, 150 S. Fifth St.

KEWANEE

Kewanee Public Hospital, 719 Elliott St.

LAKE FOREST

Lake Forest Hospital, 660 N. Westmoreland Rd.

LA SALLE

St. Mary's Hospital, 1015 O'Connor Ave.

LIBERTYVILLE

Condell Memorial Hospital, Cleveland & Stewart Aves.

LINCOLN

Abraham Lincoln Memorial Hospital, 315 Eighth St.

MACOMB

McDonough District Hospital, 525 E. Grant Ave.

McHENRY

McHenry Hospital, 3516 W. Waukegan Rd.

MATTOON
Memorial District Hospital of Coles County,
2101 Champaign Ave.

MELROSE PARK
Westlake Hospital, 1225 Superior St.

MENDOTA
Mendota Community Hospital, Memorial Dr. &
Rt. 51

MOLINE
Moline Public Hospital, 635 Tenth Ave.

MONMOUTH
Monmouth Hospital, 515 E. Euclid Ave.

MT. CARMEL
Wabash General Hospital, Maysville Rd.

MT. VERNON
Good Samaritan Hospital, 605 N. Twelfth St.

NAPERVILLE
Edward Hospital, S. Washington St.

NORMAL
Brokaw Hospital, Virginia at Franklin Ave.

OAK LAWN
Christ Community Hospital, 4440 W. 95th St.

OAK PARK
West Suburban Hospital, 518 N. Austin Blvd.

OLNEY
Richland Memorial Hospital, 800 E. Locust St.

OTTAWA
Ryburn Memorial Hospital, 701 Clinton Ave.

PARK RIDGE
Lutheran General Hospital, 1775 Dempster St.

PEKIN
Pekin Memorial Hospital, Corner of 14th and
Court St.

PEORIA
Methodist Hospital, 211 N.E. Glen Oak Ave.
Proctor Community Hospital, 5409 N. Knoxville
Ave.
St. Francis Hospital, 530 N.E. Glen Oak Ave.

PERU
Peoples Hospital, 925 W. Street

QUINCY
Blessing Hospital, 1005 Broadway
St. Mary's Hospital, 1415 Vermont St.

ROCK ISLAND
St. Anthony's Hospital, 767—30th St.

ROCKFORD
Rockford Memorial Hospital, 2400 N. Rockton
Ave.
St. Anthony's Hospital, 6666 E. State St.
Swedish-American Hospital, 1316 Charles St.

ST. CHARLES
Delnor Hospital, 975 N. Fifth Ave.

SPRINGFIELD
Memorial Hospital, First and Miller Sts.
St. John's Hospital, 701 E. Mason St.

URBANA
Carle Hospital, 602 W. University Ave.
Merey Hospital, 1400 W. Park Ave.

WAUKEGAN
St. Therese Hospital, W. Washington St.
Victory Memorial Hospital, 1324 N. Sheridan Rd.

WOODSTOCK
Memorial Hosp. for McHenry County, 527 W.
South St.

ZION
Zion-Benton Hospital, Inc., 2500 Emmaus Ave.

APPROVED LABORATORIES—PKU— FLUOROMETRIC TEST*

As of Jan. 1, 1966

ALTON
Alton Memorial Hospital Laboratory

AURORA
Clinical Laboratory, Aurora Medical Park, 143
S. Lincoln Ave.

CHAMPAIGN
Burnham City Hospital Laboratory

CHICAGO
Children's Memorial Hospital Laboratory
Columbus Hospital Laboratory
Michael Reese Hospital
Mt. Sinai Hospital Laboratory
Presbyterian-St. Luke's Hospital
State Laboratory, 1800 W. Fillmore St.

ELGIN
Sherman Hospital Laboratory

EVANSTON
St. Francis Hospital Laboratory

FREEPORT
Freeport Memorial Hospital Laboratory

NAPERVILLE
Edward Hospital Laboratory

OAK LAWN
Christ Community Hospital

OAK PARK
Oak Park Hospital Laboratory

PEORIA
St. Francis Hospital Clinical Laboratory

ROCKFORD
Swedish-American Hospital Laboratory

SKOKIE
Skokie Valley Community Hospital Laboratory

*These laboratories are approved for the use of
this procedure for both screening and quantitative
determinations.

STATUTORY BOARDS AND COMMISSIONS

(Allied with Public Health Operations)

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HOSPITALS

The Illinois Department of Public Health is responsible for implementing the Hospital Licensing Act, excerpts from which follow:

Section 2. The purpose of this Act is to provide for the better protection of the public health through the development, establishment, and enforcement of standards (1) for the care of individuals in hospitals, and (2) for the construction, maintenance, and operation of hospitals which, in light of advancing knowledge, will promote safe and adequate treatment of such individuals in hospitals.

Hospital Licensing Requirements

To implement the Hospital Licensing Act, the Department of Public Health has pertinent requirements. The following cover the medical staff.

1. The medical staff shall be composed only of physicians and dentists licensed by the Illinois Department of Registration and Education in accordance, respectively, with provisions of the Medical Practice Act and Dental Practice Act.
2. The medical staff shall be organized in accordance with written bylaws, rules and regulations, approved by the governing board. The bylaws, rules and regulations shall specifically provide:
 - a. for eligibility for staff membership;
 - b. for such divisions and departments as are warranted, (as a minimum, Active and Consulting divisions are required)
 - c. for such officers and/or committees as are warranted; (a medical records committee is required)
 - d. for determination of qualifications and privileges;
 - e. that medical staff meetings be held regularly, and that written minutes of all meetings be kept;
 - f. for review and analysis of the clinical experience of the hospital at regular intervals—the medical records of patients to be the basis for such review and analysis;
 - g. that tissue removed at operation shall be examined by a qualified pathologist and that the findings shall be made a part of the patient's medical record;
 - h. for consultation between medical staff members in complicated cases; and
 - i. for keeping complete medical records.

Section B. Supervision of Patient Care

All persons admitted to the hospital shall be under the professional care of a member of the medical staff.

Section C. Orders for Medication and Treatment

No medication or treatment shall be given to a patient except on the written order of a member of the medical staff.

Section D. Tissue Examination

All tissue removed at operation shall be examined by a qualified pathologist and the findings shall be made a part of the patient's hospital medical record. A tissue committee of the medical staff is highly recommended.

Section E. Availability for Emergencies

The governing board shall provide that one or more physicians shall be available at all times for emergencies.

GENERAL HOSPITALS

(For Identification—see footnote, page 199)

ALEDO (Mercer)

Mercer County Hospital (E-60)

ALTON (Madison)

*Alton Memorial Hospital (B-183)

*St. Anthony's Hospital (B-140)

*St. Joseph's Hospital (B-158)

AMBOY (Lee)

Amboy Public Hospital (B-14)

ANNA (Union)

Union County Hospital District (F-61)

ARLINGTON HEIGHTS (Cook)

*Northwest Community Hospital (B-121)

AURORA (Kane)

*Copley Memorial Hospital (B-200)

*St. Charles Hospital (B-118)

*St. Joseph Mercy Hospital (B-107)

AVON (Fulton)

Saunders Hospital (B-24)

BEARDSTOWN (Cass)

*Schmitt Memorial Hospital (D-50)

BELLEVILLE (St. Clair)

*Memorial Hospital (B-154)

†*St. Elizabeth's Hospital (B-294)

†*Scott, U. S. Air Force Hospital (J-300)

BELVIDERE (Boone)

*Highland Hospital, Inc. (B-67)

*St. Joseph's Hospital (B-100)

BENTON (Franklin)

*The Franklin Hospital (F-125)

BERWYN (Cook)

*MacNeal Memorial Hospital (B-343)

BLOOMINGTON (McLean)

*Mennonite Hospital (B-131)

*St. Joseph's Hospital (B-160)

BLUE ISLAND (Cook)

*St. Francis Hospital (B-181)

BREESE (Clinton)

*St. Joseph's Hospital (B-42)

CAIRO (Alexander)

*St. Mary's Hospital (B-124)

- CANTON (Fulton)
 *Graham Hospital Association (B-152)
- CARBONDALE (Jackson)
 *Doctors Hospital (B-71)
 *Holden Hospital (B-55)
- CARLINVILLE (Macoupin)
 *Carlinville Area Hospital (B-68)
- CARMI (White)
 *Carmi Township Hospital (H-61)
- CARROLLTON (Greene)
 Thomas H. Boyd Memorial Hospital (B-47)
- CARTHAGE (Hancock)
 *Memorial Hospital (B-74)
- CENTRALIA (Marion)
 *St. Mary's Hospital (B-117)
- CHAMPAIGN (Champaign)
 *Burnham City Hospital (D-156)
 *Cole Hospital (C-61)
- CHARLESTON (Coles)
 *Charleston Community Memorial Hospital, Inc. (B-65)
- CHESTER (Randolph)
 Memorial Hospital (F-47)
- CHICAGO (Cook)
 *Alexian Brothers Hospital (B-240)
 *American Hospital of Chicago (B-168)
 *Augustana Hospital (B-358)
 *Belmont Community Hospital (B-151)
 *Bethany Brethren Hospital (B-73)
 *Bethany Methodist Hospital (B-190)
 *Bethesda Hospital (B-99)
 *Central Community Hospital (B-93)
 Cermak Memorial Hospital (D-129)
 †*Chicago Wesley Memorial Hospital (B-652)
 *Columbus Hospital (B-413)
 *Cook County Hospital (E-2,747)
 †*Doctors General Hospital (B-169)
 *Edgewater Hospital (B-334)
 *Englewood Hospital (B-159)
 *Evangelical Hospital (B-177)
 *Forkosh Memorial Hospital (B-94)
 *Frank Cuneo Hospital (B-174)
 *Franklin Boulevard Community Hospital (B-110)
 *Garfield Park Community Hospital (B-141)
 †*Grant Hospital of Chicago (B-339)
 *Henrotin Hospital (B-104)
 *Holy Cross Hospital (B-335)
 *Hospital of St. Anthony de Padua (B-209)
 Ida Mae Scott Hospital (B-15)
 *Illinois Central Hospital (B-301)
 †*Illinois Masonic Hospital (B-492)
 *Jackson Park Hospital (C-184)
 †*Loretto Hospital (B-165)
 *Louis A. Weiss Memorial Hospital (B-250)
 *Louise Burg Hospital (B-114)
 *Lutheran Deaconess Hospital (B-183)
 *Martha Washington Hospital (B-58)
 *Mary Thompson Hospital (B-112)
 †*Mercy Hospital (B-355)
 †*Michael Reese Hospital and Medical Center (B-986)
- †*Mount Sinai Hospital of Chicago (B-391)
 *Northwest Hospital, Inc. (C-225)
 *Norwegian-American Hospital, Inc. (B-218)
 †*Passavant Memorial Hospital (B-351)
 †*Presbyterian-St. Luke's Hospital (B-852)
 *Provident Hospital and Training School (B-203)
 *Ravenswood Hospital Association (B-280)
 *Resurrection Hospital (B-260)
 *Roosevelt Memorial Hospital (B-115)
 Roseland Community Hospital (B-131)
 *St. Anne's Hospital (B-359)
 *St. Bernard's Hospital (B-229)
 *St. Elizabeth's Hospital (B-303)
 *St. Frances Xavier Cabrini Hospital (B-222)
 *St. George Hospital (B-128)
 †*St. Joseph Hospital (B-468)
 *St. Mary of Nazareth Hospital (B-280)
 *South Chicago Community Hospital (B-300)
 *South Shore Hospital (B-189)
 *Swedish Covenant Hospital (B-240)
 †*University of Chicago Hospitals and Clinics (B-695)
 *University of Illinois Research and Educational Hospitals (I-605)
 †*Veterans Administration Research Hospital (J-516)
 †*Veterans Administration West Side Hospital (J-505)
 *The von Solbrig Memorial Hospital, Inc. (A-102)
 *Walther Memorial Hospital (B-201)
 *Woodlawn Hospital (B-148)
- CHICAGO HEIGHTS (Cook)
 *St. James Hospital (B-280)
- CHRISTOPHER (Franklin)
 *The Miners Hospital (B-34)
- CLIFTON (Iroquois)
 Central Hospital (B-40)
- CLINTON (DeWitt)
 John Warner Hospital (D-45)
- DANVILLE (Vermilion)
 *Lake View Memorial Hospital (B-236)
 *St. Elizabeth Hospital (B-188)
- DECATUR (Macon)
 *Decatur and Macon County Hospital (B-354)
 *St. Mary's Hospital (B-370)
 *The Wabash Memorial Hospital (B-68)
- DE KALB (DeKalb)
 *DeKalb Public Hospital (D-90)
- DES PLAINES (Cook)
 *Holy Family Hospital (B-195)
- DIXON (Lee)
 *Dixon Public Hospital (B-120)
- DOLTON (Cook)
 Thomsen Clinic Hospital (B-6)
- DU QUOIN (Perry)
 *Marshall Browning Hospital (B-66)
- EAST ST. LOUIS (St. Clair)
 *Christian Welfare Hospital (B-194)
 *St. Mary's Hospital (B-364)

EFFINGHAM (Effingham)
 *St. Anthony Memorial Hospital (B-126)
ELDORADO (Saline)
 Ferrell Hospital (C-49)
 Pearce Hospital Foundation (B-33)
ELGIN (Kane)
 *St. Joseph Hospital (B-169)
 *Sherman Hospital Association (B-329)
ELMHURST (DuPage)
 *Memorial Hospital of DuPage County (B-311)
EUREKA (Woodford)
 *Eureka Hospital (C-31)
EVANSTON (Cook)
 *Community Hospital of Evanston (B-54)
 †*Evanston Hospital Association (B-440)
 *Northwestern University Student Health Service Hospital (B-44)
 *St. Francis Hospital (B-362)
EVERGREEN PARK (Cook)
 †*Little Company of Mary Hospital (B-560)
FAIRBURY (Livingston)
 *Fairbury Hospital (B-92)
FAIRFIELD (Wayne)
 *Fairfield Memorial Hospital (B-94)
FLORA (Clay)
 *Clay County Hospital (E-52)
FREEPORT (Stephenson)
 *Freeport Memorial Hospital (B-186)
GALENA (Jo Daviess)
 *Northwestern Illinois Community Hospital (F-31)
GALESBURG (Knox)
 *Galesburg Cottage Hospital (B-187)
 *St. Mary's Hospital (B-134)
GENESEO (Henry)
 *Hammond-Henry District Hospital (F-41)
GENEVA (Kane)
 *Community Hospital (B-116)
GIBSON CITY (Ford)
 *Gibson Community Hospital (B-45)
GRANITE CITY (Madison)
 *St. Elizabeth Hospital (B-220)
GREAT LAKES (Lake)
 †*U. S. Naval Hospital (J-1,159)
GREENVILLE (Bond)
 *Edward A. Utlaut Memorial Hosp. (B-43)
HARRISBURG (Saline)
 Doctors Hospital of Harrisburg, Inc. (C-72)
HARVARD (McHenry)
 *Harvard Community Memorial Hospital (F-40)
HARVEY (Cook)
 *Ingalls Memorial Hospital (B-241)
HAVANA (Mason)
 *Mason District Hospital (F-48)
HAZEL CREST (Cook)
 *South Suburban Hospital Foundation (B-56)
HERRIN (Williamson)
 *Herrin Hospital (B-102)
HIGHLAND (Madison)
 *St. Joseph's Hospital (B-133)
HIGHLAND PARK (Lake)
 *The Highland Park Hospital Foundation (B-184)
HILLSBORO (Montgomery)
 Hillsboro Hospital (B-68)
HINES (Cook)
 †*Veterans Administration Hospital (J-2,079)
HINSDALE (DuPage)
 †*Hinsdale Sanitarium and Hospital (B-347)
HOOPESTON (Vermilion)
 *Hoopeston Community Memorial Hospital (B-44)
HOPEDALE (Tazewell)
 Hopedale Hospital (B-44)
JACKSONVILLE (Morgan)
 *Holy Cross Hospital (B-120)
 *Passavant Memorial Area Hospital (B-150)
JERSEYVILLE (Jersey)
 *Jersey Community Hospital (F-54)
JOLIET (Will)
 *St. Joseph Hospital (B-426)
 *Silver Cross Hospital (B-263)
KANKAKEE (Kankakee)
 *Riverside Hospital (B-136)
 *St. Mary's Hospital (B-262)
KEWANEE (Henry)
 *Kewanee Public Hospital (B-75)
 *St. Francis Hospital (B-87)
LA GRANGE (Cook)
 *Community Memorial General Hospital (B-224)
LA HARPE (Hancock)
 LaHarpe Hospital (B-19)
LAKE FOREST (Lake)
 *Lake Forest Hospital (B-101)
LA SALLE (La Salle)
 *St. Mary's Hospital (B-125)
LAWRENCEVILLE (Lawrence)
 *Lawrence County Memorial Hospital (E-64)
LIBERTYVILLE (Lake)
 *Condell Memorial Hospital (B-91)
LINCOLN (Logan)
 *Abraham Lincoln Memorial Hospital (B-102)
LITCHFIELD (Montgomery)
 St. Francis Hospital (B-134)
MACOMB (McDonough)
 *McDonough District Hospital (F-104)
 Phelps Hospital (B-24)
 *St. Francis Hospital (B-44)
MANTENO (Kankakee)
 Hillman Memorial Hospital (C-22)
MARION (Williamson)
 *Marion Memorial Hospital (D-75)
 *Veterans Administration Hospital (J-176)
MATTOON (Coles)
 *Memorial District Hospital of Coles County (F-99)
McHENRY (McHenry)
 *McHenry Hospital (B-43)
McLEANSBORO (Hamilton)
 Hamilton Memorial Hospital (F-32)
MELROSE PARK (Cook)
 *Gottlieb Memorial Hospital (B-136)
 *Westlake Community Hospital (B-141)
MENDOTA (La Salle)
 *Mendota Community Hospital (B-58)

- METROPOLIS (Massac)
 *Massac Memorial Hospital (F-57)
- MOLINE (Rock Island)
 *Lutheran Hospital (B-210)
 *Moline Public Hospital (D-240)
- MONMOUTH (Warren)
 *Monmouth Hospital (D-80)
- MONTICELLO (Piatt)
 The John and Mary E. Kirby Hospital (B-35)
- MORRIS (Grundy)
 *Morris Hospital (B-49)
- MORRISON (Whiteside)
 Morrison Community Hospital (F-32)
- MOUNT CARMEL (Wabash)
 *Wabash General Hospital District (F-79)
- MOUNT VERNON (Jefferson)
 *Good Samaritan Hospital (B-110)
 Jefferson County Memorial Hospital (B-51)
- MURPHYSBORO (Jackson)
 *St. Joseph Memorial Hospital (B-64)
- NAPERVILLE (DuPage)
 *Edward Hospital (F-110)
- NASHVILLE (Washington)
 *Washington County Hospital (F-36)
- NORMAL (McLean)
 *Brokaw Hospital (B-142)
- NORTHLAKE (Cook)
 *Northlake Community Hospital (B-95)
- OAK LAWN (Cook)
 *Christ Community Hospital (B-348)
- OAK PARK (Cook)
 *Oak Park Hospital (B-246)
 *West Suburban Hospital (B-389)
- OLNEY (Richland)
 *Richland Memorial Hospital (E-150)
- OREGON (Ogle)
 *Warmolts Clinic (C-25)
- OTTAWA (LaSalle)
 *Ryburn Memorial Hospital (D-119)
- PANA (Christian)
 *Huber Memorial Hospital (B-70)
- PARIS (Edgar)
 *Hospital & Medical Foundation of Paris, Inc. (B-75)
- PARK RIDGE (Cook)
 †*Lutheran General Hospital (B-316)
- PAXTON (Ford)
 *Paxton Community Hospital (B-39)
- PEKIN (Tazewell)
 *Pekin Memorial Hospital (B-186)
- PEORIA (Peoria)
 †*The Methodist Hospital of Central Illinois (B-473)
 *Proctor Community Hospital (B-210)
 †*St. Francis Hospital (B-623)
- PERU (LaSalle)
 Peoples Hospital (B-92)
- PINCKNEYVILLE (Perry)
 *Pinckneyville Community Hospital (F-28)
- PITTSFIELD (Pike)
 *Illini Community Hospital (B-100)
- PONTIAC (Livingston)
 *St. James Hospital (B-65)
- PRINCETON (Bureau)
 *Perry Memorial Hospital (D-98)
- QUINCY (Adams)
 *Blessing Hospital (B-237)
 *St. Mary's Hospital (B-292)
- RANTOUL (Champaign)
 *Chanute, U. S. Air Force Hospital (J-175)
- RED BUD (Randolph)
 *St. Clement's Hospital (B-86)
- ROBINSON (Crawford)
 *Crawford Memorial Hospital (F-64)
- ROCHELLE (Ogle)
 *Rochelle Community Hospital (B-38)
- ROCKFORD (Winnebago)
 *Rockford Memorial Hospital (B-296)
 *St. Anthony Hospital (B-186)
 †*Swedish-American Hospital (B-302)
- ROCK ISLAND (Rock Island)
 †*St. Anthony's Hospital (B-240)
- ROSICLARE (Hardin)
 *Hardin County General Hospital (B-27)
- RUSHVILLE (Schuyler)
 *Sarah D. Culbertson Memorial Hospital (F-50)
- ST. CHARLES (Kane)
 *Delnor Hospital (B-72)
- SALEM (Marion)
 *Salem Memorial Hospital (B-44)
- SANDWICH (DeKalb)
 *Sandwich Community Hospital (B-41)
- SAVANNA (Carroll)
 Savanna City Hospital (D-47)
- SHELBYVILLE (Shelby)
 *Shelby County Memorial Hospital (B-51)
- SKOKIE (Cook)
 *Skokie Valley Community Hospital (B-150)
- SPARTA (Randolph)
 *Sparta Community Hospital (F-34)
- SPRINGFIELD (Sangamon)
 †*Memorial Hospital (B-402)
 †*St. John's Hospital (B-720)
- SPRING VALLEY (Bureau)
 *St. Margaret's Hospital (B-141)
- STAUNTON (Macoupin)
 *Community Memorial Hospital (B-49)
- STERLING (Whiteside)
 *Community General Hospital (D-135)
 The Home Hospital (B-24)
- STREATOR (La Salle)
 *St. Mary's Hospital (B-207)
- SYCAMORE (DeKalb)
 *Sycamore Municipal Hospital (D-70)
- TAYLORVILLE (Christian)
 *St. Vincent Memorial Hospital (B-156)
- TUSCOLA (Douglas)
 Douglas County Jarman Memorial Hospital (E-44)
- URBANA (Champaign)
 *Carle Memorial Hospital (B-165)
 *McKinley Memorial Hospital (I-61)
 †*Merey Hospital (B-225)

VANDALIA (Fayette)
 *Fayette County Hospital (F-102)
 WATSEKA (Iroquois)
 *Iroquois Hospital (B-71)
 WAUKEGAN (Lake)
 *Lake County General Hospital (E-65)
 *St. Therese Hospital (B-280)
 *Victory Memorial Hospital (B-352)
 WEST FRANKFORT (Franklin)
 UMW Union Hospital (B-40)

WHITE HALL (Greene)
 White Hall Hospital, Inc. (B-18)
 WINFIELD (DuPage)
 Central DuPage Hospital (B-113)
 WOOD RIVER (Madison)
 *Wood River Township Hospital (H-73)
 WOODSTOCK (McHenry)
 *Memorial Hospital for McHenry County
 (B-100)
 ZION (Lake)
 *Zion-Benton Hospital (C-94)

HOSPITALS WITH SPECIAL TYPE OF SERVICE

		Type of Service
AURORA (Kane)	Kane County Springbrook Sanitarium (E-57)	TB
CAIRO (Alexander)	Alexander County Tuberculosis Hospital (E-45)	TB
CASEYVILLE (St. Clair)	Pleasant View Sanatorium (E-78)	TB
CHICAGO (Cook)	*Booth Memorial Hospital (B-25)	Maternity
	*Charles H. and Rachel M. Schwab Rehabilitation Hospital (B-61)	Rehabilitation
	*Chicago Eye, Ear, Nose and Throat Hospital (C-37)	EENT
	*Chicago State Tuberculosis Sanitarium (I-335)	TB
	*The Children's Memorial Hospital (B-231)	Pediatric
	Halco Sanitarium, Inc. (C-10)	Alcoholic
	Illinois Children's Hospital-School (I-96)	Rehabilitation, Pediatric
	*Illinois Eye and Ear Infirmary (I-124)	EENT
	Illinois Visually Handicapped Institute (I-52)	Legally Blind
	*LaRabida Jackson Park Sanitarium (B-77)	Pediatric, Chronic
	*Martha Washington Hospital (B-50)	Alcoholic
	*Municipal Contagious Disease Hospital (D-100)	Contagious Disease
	*Municipal Tuberculosis Sanitarium (D-1,129)	TB
	*Rehabilitation Institute of Chicago (B-65)	Rehabilitation
	St. Vincent's Infant Hospital (B-65)	Pediatric
	*Shriners Hospital for Crippled Children (B-68)	Orthopedic, Pediatric
DANVILLE (Vermilion)	Vermilion County Tuberculosis Dispensary and Hospital (E-34)	TB
DECATUR (Macon)	*Macon County Tuberculosis Sanatorium (E-75)	Nursing Home, TB
EDWARDSVILLE (Madison)	Madison County Sanatorium (E-86)	TB
HINSDALE (Cook)	*The Suburban Cook County Tuberculosis Sanitarium District (G-209)	TB
JACKSONVILLE (Morgan)	Oaklawn, Morgan County Tuberculosis Sanatorium (E-40)	TB

		Type of Service
JOLIET (Will)	Sunny Hill Sanatorium (E-60)	TB
MACKINAW (Tazewell)	Oak Knoll Sanatorium (E-40)	TB
MOOSEHEART (Kane)	Mooseheart Hospital (B-43)	Pediatric
MOUNT VERNON (Jefferson)	*Mount Vernon State Tuberculosis Sanitarium (I-125)	TB
OAK FOREST (Cook)	Oak Forest Hospital (E-2,463)	Chronic, Rehabilitation
OTTAWA (LaSalle)	Highland Sanatorium and Convalescent Home of LaSalle County (E-82)	TB, Nursing Home
	Ottawa General Hospital (C-42)	Chronic
PEORIA (Peoria)	*Peoria Municipal Tuberculosis Sanitarium (D-79)	TB
PONTIAC (Livingston)	Livingston County Sanatorium (E-45)	TB
QUINCY (Adams)	Hillcrest, Adams County Tuberculosis Sanatorium (E-38)	TB
ROCKFORD (Winnebago)	Rockford Municipal Tuberculosis Sanitarium (D-101)	TB, Nursing Home
ROCK ISLAND (Rock Island)	*Rock Island County Tuberculosis Sanatorium (E-71)	TB
SPRINGFIELD (Sangamon)	*St. John's Sanatorium (B-125)	TB
URBANA (Champaign)	Outlook Champaign County Tuberculosis Sanatorium (E-17)	TB
	University of Illinois Rehabilitation Center (I)	Rehabilitation
WAUKEGAN (Lake)	*Lake County Tuberculosis Sanatorium (E-90)	TB
WEDRON (LaSalle)	St. Joseph's Health Resort and Sanitarium (B-94)	Medical- Chronic

PRIVATE MENTAL HOSPITALS

AURORA (Kane)	ELGIN (Kane)
*Mercyville Hospital (B-200)	*Resthaven Sanitarium (C-100)
CHICAGO (Cook)	FOREST PARK (Cook)
*Fairview Hospital (C-150)	*Riveredge (C-257)
Nicholas J. Pritzker Center (B-40)	JACKSONVILLE (Morgan)
*Pinel Hospital (B-67)	The Norbury Hospital (C-50)
*Ridgeway Hospital (B-75)	WINNETKA (Cook)
DES PLAINES (Cook)	*North Shore Hospital (C-100)
*Forest Hospital (C-90)	

STATE SCHOOLS FOR MENTALLY DEFECTIVE

CENTRALIA (Marion)
Warren G. Murray Children's Center (558)
CHICAGO (Cook)
Illinois State Pediatric Institute (264)
DIXON (Lee)
Dixon State School (3,336)
LINCOLN (Logan)
Lincoln State School (3,828)

STATE MENTAL HOSPITALS

ALTON (Madison)	GALESBURG (Knox)
Alton State Hospital (1,371)	*Galesburg State Research Hospital (1,843)
ANNA (Union)	JACKSONVILLE (Morgan)
Anna State Hospital (1,838)	Jacksonville State Hospital (2,002)
CHICAGO (Cook)	KANKAKEE (Kankakee)
Chicago State Hospital (2,814)	Kankakee State Hospital (2,493)
*Illinois State Psychiatric Institute (360)	MANTENO (Kankakee)
DANVILLE (Vermilion)	Manteno State Hospital (5,841)
*Veterans Administration Hospital (J-1,680)	MENARD (Randolph)
DOWNEY (Lake)	Illinois Security Hospital (400)
*Veterans Administration Hospital (J-2,487)	PEORIA (Peoria)
EAST MOLINE (Rock Island)	*Peoria State Hospital (1,660)
*East Moline State Hospital (1,343)	TINLEY PARK (Cook)
ELGIN (Kane)	Tinley Park State Hospital (480)
Elgin State Hospital (3,910)	

The hospitals marked with an asterisk () are those which are accredited by the Joint Commission on Accreditation of Hospitals as of Dec. 31, 1965.

The presence of a hospital on this list means it has complied in the main with the standards of the Joint Commission on Accreditation of Hospitals as compiled over the years by the medical and hospital professions. The standards are minimal and it is hoped hospitals will make every effort to exceed them.

Hospitals with less than 25 beds are not eligible for accreditation. Inquiries about this listing or hospital accreditation should be directed to the office of the Joint Commission on Accreditation of Hospitals at 201 E. Ohio St., Chicago 60611.

†Dagger indicates general hospitals having psychiatric units licensed by the Illinois Department of Mental Health. All other mental facilities are licensed and/or operated by this department (federal hospitals excluded).

Number in parenthesis indicates number of beds in hospital. Initial preceding number refers to the type of control, as follows:

- A — Corporation
- B — Non-profit association or corporation
- C — Privately owned and operated
- D — City
- E — County
- F — Hospital District
- G — Sanitarium District
- H — Township
- I — State
- J — Federal

DIRECTORY OF LICENSED HOMES

The following list of homes licensed by the Illinois Department of Public Health (as of Mar. 1, 1966) is divided into three sections: nursing homes, sheltered care homes, and homes for the aged. Ownership of these homes may be individual, partnership, corporation for profit, non-profit corporation, government, or trust-endowment.

A Nursing Home is equipped and staffed to provide personal and nursing care to all residents.

A Sheltered Care Home is equipped and staffed to provide only personal services such as assistance with meals, dressing, bathing, etc., but not nursing care.

A Home for the Aged is operated not-for-profit under religious or fraternal auspices or under an endowment. It is operated primarily for persons over 60 years of age and may provide personal care only or nursing and personal care. Some of these homes for the aged provide special services over and above nursing care.

Asterisk indicates member of Illinois Nursing Home Association.

NURSING HOMES

ABINGDON (Knox County)

Abingdon Nursing Home*
W. Martin St.

ALBION (Edwards County)

Rest Haven Manor*
120 W. Main St.

ALEDO (Mercer County)

Mercer County Nursing Home
Rt. 4

Oakview Nursing Home

3rd Ave. and 12th St.

Twilight Haven

303 E. Seventh St.

ALHAMBRA (Madison County)

Haven of Rest*

ALTON (Madison County)

College Avenue Nursing Home*

920 College Ave.

Main Street Nursing Home*

1216 Main St.

Mather-Yinger Nursing and Convalescent
Center, Inc.

2349 Virden St.

Riverview Nursing Home*

440 Jefferson St.

Villa Terrace Nursing Home*

510 Seminary Sq.

AMBOY (Lee County)

Forman Nursing Home

339 N. Mason Ave.

ANNA (Union County)

Union County Skilled Nursing Home*

517 N. Main St.

ARCOLA (Douglas County)

Fishel Nursing Home

129 N. Pine St.

ARLINGTON HEIGHTS (Cook County)

Arlington Heights Rest Home*

414 N. Vail St.

AROMA PARK (Kankakee County)

Campbell Nursing Home*

Fourth St.

ARROWSMITH (McLean County)

DeArms Nursing Home

W. Crosson St.

ARTHUR (Moultrie County)

The Arthur Home*

423 Eberhardt Dr.

ATLANTA (Logan County)

Atlanta Nursing Home

Chatham St.

Bartmann Nursing Home*

R.R. 1

AUBURN (Sangamon County)

Park's Memorial Home*

304 Maple Ave.

AUGUSTA (Hancock County)

Augusta Nursing Home*

E. Main St.

AURORA (Kane County)

Borealis Nursing Home*

1601 N. Farnsworth

Colonial Nursing Home

422 N. Lake

Elmwood Nursing Home

1017 W. Galena Blvd.

BARRINGTON (Cook County)

Barrington Rest Home, Inc.*

145 W. Main St.

BARRY (Pike County)

Barry Nursing Home*

780 Grand St.

Churchill Nursing Home

1038 Pratt St.

BARTONVILLE (Peoria County)

Martin's Convalescent Home

10 McClure Ct.

BATAVIA (Kane County)

Kane County Home

Averill Rd.

BEARDSTOWN (Cass County)

Boyd Nursing Home, Inc.

209-215 W. Third St.

Brierly House Nursing Home, Inc.*

604 State St.

Parkview Nursing Home

903 E. Third St.

BEAVERVILLE (Iroquois County)

Haven of Rest Nursing Home*

BELLEVILLE (St. Clair County)

Atkinson Nursing Home

514 S. Jackson St.

Herald Nursing Home

506 Court St.

Hillcrest Convalescent Home

420 Mascoutah Ave.

Memorial Nursing Home*

4315 Memorial Dr.

Rest Haven Old Folks Home

44th St. and N. Belt West

BELLWOOD (Cook County)

Elizabeth Van Gehr Nursing Home

209 S. 22nd Ave.

BELVIDERE (Boone County)
 Maple Crest Nursing Home
 Boone County Home
 R.R. 1, Rt. 76
 Sutton's Nursing Home*
 226 N. State St.

BEMENT (Piatt County)
 Bement Rest Haven*
 101 S. Sangamon St.

BENTON (Franklin County)
 Franklin Hospital Skilled Nursing Care Unit
 201 Bailey Ln.
 Linwood Nursing Home, Inc.
 N. Main and Mitchell Sts.
 Rest Haven Nursing Home*
 418 W. Webster

BERWYN (Cook County)
 Fairfax Geriatric & Convalescent Center
 3601 S. Harlem Ave.
 Pershing Convalescent Home*
 3900 S. Oak Park Ave.
 R. N. Convalescent Home*
 6918 Windsor Ave.

BLANDINSVILLE (McDonough County)
 Newland Nursing Home*
 Van Buren and Breckenridge

BLOOMINGDALE (DuPage County)
 Elaine Boyd Creche
 267 E. Lake St.
 Mark Lund Hilltop, Inc.
 158 Prairie St.

BLOOMINGTON (McLean County)
 Heritage Manor*
 Walnut at Clinton Blvd.
 Maple Grove Nursing Home
 S. Main Street Rd.
 Nel-Dor Arms Nursing Home*
 1116 E. Lafayette St.
 Twin City Nursing Home
 22 White Pl.

BLUE ISLAND (Cook County)
 Bel-Air Nursing Home
 2418 W. 127th St.
 Blue Island Nursing Home
 2427 W. 127th St.
 Burr Oaks Nursing and Convalescent Center*
 2426 W. Burr Oaks Ave.

BLUFORD (Jefferson County)
 Schumm Nursing Home

BRADLEY (Kankakee County)
 The Hallmark House
 700 N. Kinsie, Rt. 54

BROOKFIELD (Cook County)
 Brookfield Nursing and Convalescent Home
 9128 W. 31st St.
 Hill Haven Nursing Home
 4548 Deyo

BUNKER HILL (Macoupin County)
 Tower View Nursing Home No. 1
 403 Morgan St.

BURNHAM (Cook County)
 The Homestead
 14500 Manistee Ave.

BUSHNELL (McDonough County)
 The Elms

McDonough County Home
 Heron Nursing Home*
 708 N. Dean St.

CAMP POINT (Adams County)
 Grandview Manor, Inc.
 205 E. Spring St.

CANTON (Fulton County)
 Canton Nursing Home, Inc.*
 N. Main St.
 Sherwood Nursing Home
 914 S. Main St.

CARBONDALE (Jackson County)
 Styrest Nursing Home*
 Rt. 4 on Tower Rd.

CARLINVILLE (Macoupin County)
 Joiner Nursing Home
 706 N. Oak St.
 Lake View Nursing Home*
 R.R. 3
 Lee Nursing Home*
 334 Orient St.
 Macoupin County Nursing Home
 R.R. 2
 Scherba's Nursing Home
 817 N. High St.
 Weatherford Nursing Home
 318 Buchanan St.
 Woodlawn Acres Convalescent and
 Nursing Home*
 W. Hard Rd., State Rt. 108

CARMI (White County)
 White County Nursing Home
 R.R. 3
 Wilmar Restorium, Inc.
 College Blvd.

CARROLLTON (Greene County)
 Tower View Nursing Home No. 2
 626 Maple Ave.

CASEY (Clark County)
 Casey Nursing Home*
 N. 10th St.
 Rude's Goodwill Home
 208 W. Main St.

CASEYVILLE (St. Clair County)
 Caseyville Nursing Home*
 321 O'Fallon St.

CENTRALIA (Marion County)
 Centralia Fireside House, Inc.
 1030 E. McCord St.

CHAMPAIGN (Champaign County)
 American Manor Convalescent Home*
 1002 W. Church St.
 Greenbrier Manor*
 1915 S. Mattis
 Leonard Nursing Home, Inc.
 618 W. Church
 Oliver Nursing Home
 1102 W. Church St.

CHARLESTON (Coles County)
 Adkins Nursing Home*
 849 C St.
 Charleston Nursing Home
 216 Fifth St.
 Hilltop Nursing Home, Inc.*
 635 Division St.

- Hilltop Nursing Home, Inc.*
910 W. Polk St.
- Oakwood Convalescent Home*
1041 Seventh St.
- Rennels' Nursing Home
214 Fifth St.
- Wilson-Kaley Nursing Home*
1501 18th St.
- CHERRY VALLEY (Winnebago County)
Cherry Valley Rest Home
Box 123
- CHESTER (Randolph County)
Three Springs Lodge*
R.R. 1
- CHICAGO (Cook County)
A-1 Nursing Home, Inc.*
4247 N. Hazel
- A-1 Nursing Home, Inc.
4249 N. Hazel
- Addison Manor, Inc.*
3526 N. Reta Ave.
- Albany Park Kosher Nursing Home, Inc.
3418 W. Ainslie
- All American Nursing Home*
5440-52 N. Broadway
- Alshore House
2840 Foster Ave.
- Anna Hadley Nursing Home
3209 W. Douglas Blvd.
- Arthur W. Devermann Residence
5746 N. Sheridan Rd.
- Austin Congress Nursing Home*
901 S. Austin Blvd.
- Beachview Convalescent Home, Inc.*
6345 N. Sheridan Rd.
- Beacon Hill Nursing Home
4530 N. Beacon St.
- Beckwith Nursing Home*
3240 W. Washington Blvd.
- Bell Nursing Home
11079 S. Bell Ave.
- Belmont Rest Home, Inc.*
1936 W. Belmont
- Beverly Hills Nursing Home
10347 Longwood Dr.
- Birchwood Beach Convalescent Home No. 1
7350 N. Sheridan Rd.
- Birchwood Beach Convalescent Home No. 2*
7364 N. Sheridan Rd.
- Bryn Mawr House, Inc.*
6141 N. Pulaski Rd.
- Burke Nursing Home*
11840 S. Western Ave.
- Burnside Rest Home
9435 Langley Ave.
- Carmen Manor
1470 W. Carmen Ave.
- Cobb and Coleman Home
4533 W. Washington Blvd.
- Colonial Towers Nursing Home*
6032 N. Kenmore Ave.
- Davis Nursing Home, Inc.*
725-29 Waveland Ave.
- Dearborn House, Inc.*
2400 S. Dearborn St.
- Douglas Park Nursing Home
1518-22 S. Albany Ave.
- Doyle's Nursing Home
9626 S. Vincennes Ave.
- Edgewater Manor*
5838 N. Sheridan Rd.
- Elizabeth Olivia Home
3952 S. Ellis Ave.
- Elsa S. Long Convalescent Home*
5250-5256 N. Sheridan Rd.
- Elston Home, Inc.
4340 N. Keystone Ave.
- Englewood Rest Haven, Inc.
7253 Yale Ave.
- Fargo Beach Home, Inc.*
7445 N. Sheridan Rd.
- Farwell Beach Convalescent Home
1145 W. Farwell Ave.
- Feinstein's Rest Home, Inc.
5960 N. Sheridan Rd.
- Fontainebleau Manor, Inc.
6318 N. Winthrop Ave.
- Fox River Pavilion
4700 N. Clarendon Ave.
- Fullerton Convalescent Home, Inc.
1400 W. Monroe St.
- Garden View Home, Inc.*
6450 N. Ridge Ave.
- Garfield Nursing Home
3834 W. Washington Blvd.
- Granville Manor
1021 Granville Ave.
- Hampden Manor*
2724 N. Hampden Ct.
- Harmon-Bragg Nursing Home, Inc., No. 1*
6455 S. Kimbark Ave.
- Harmon-Bragg Nursing Home, Inc., No. 2*
6463 S. Kimbark Ave.
- Hastings Nursing Home
7241 S. Princeton Ave.
- Hearthside Nursing Home, Inc.*
1223 W. 87th St.
- Hollywood Convalescent Home, Inc.*
1054 W. Hollywood Ave.
- Howard Convalescent Home, Inc.
6522 S. Harvard Ave.
- Ivory Nursing Home, Inc.*
5839 S. Calumet Ave.
- Johnson Nursing Home, Inc.*
3321 W. Fulton St.
- Johnson Rehabilitation Nursing Home, Inc.*
3456 W. Franklin Blvd.
- Kenmore House*
5517 N. Kenmore Ave.
- Ken-Rose Rest Home*
6255 N. Kenmore Ave.
- Kostner Manor*
1617 N. Kostner Ave.
- Lake Shore Nursing Home, Inc.*
7230 N. Sheridan Rd.
- Lakeside Nursing Home
6330 N. Sheridan Rd.

Lake View Manor Rest Home
 2824 N. Sheridan Rd.
 Lehrer Nursing Home, Inc.
 4636 N. Beacon St.
 Lincoln Park Home
 2042 N. Orleans St.
 Linderman Nursing Home, Inc.*
 3311 W. Monroe St.
 Malden Nursing Home, Inc.*
 4616 N. Malden St.
 Maple Nursing Home
 4743 W. Washington St.
 Mark Howard Home*
 4938 S. Drexel Blvd.
 Martha Washington Manor, Inc.*
 4515 S. Drexel Blvd.
 Melbourne Convalescent Home*
 4625 N. Racine Ave.
 Midwest Rest Haven, Inc.
 310 S. Hamlin Ave.
 Miller Nursing Home
 3256 W. Douglas Blvd.
 Misericordia Home
 2916 W. 47th St.
 Monterey Convalescent Home*
 4616 S. Drexel Blvd.
 Monterey Convalescent Home*
 1919 S. Prairie Ave.
 Montgomery Convalescent Home
 5956 S. Wabash Ave.
 Mortkowiez Kosher Nursing Home
 4851 N. Rockwell Ave.
 Mt. Pisgah Nursing Home
 4220-28 S. Champlain Ave.
 Nesbitt Home*
 943 W. Foster Ave.
 North Shore Rest Haven, Inc.
 7428 N. Rogers Ave.
 Ogden Park Convalescent Home*
 6617-25 S. Racine Ave.
 Panenka Nursing Home
 1901 S. Lawndale Ave.
 Park House
 2320 S. Lawndale Ave.
 Patterson Convalescent Home
 3242 W. Maypole Ave.
 Pedraza Nursing Home, Inc.
 3230 W. Washington St.
 Pedraza Nursing Home, Inc.
 3234 W. Washington St.
 Peyton Convalescent Home
 4541 S. Michigan Ave.
 Rabbi Meisels Convalescent Home, Inc.*
 4900 N. Bernard Ave.
 Rosewood Terrace Rest Home, Inc.
 6668 N. Damen Ave.
 Royal Manor*
 5640 N. Sheridan Rd.
 St. Michael's Rest Haven, Inc.
 4815 S. Drexel Blvd.
 Sheridan Gardens Convalescent Home, Inc.*
 1426 W. Birchwood Ave.
 Schiller Rest Home, Inc.*
 1428 W. Jarvis

Shorecrest Convalescent Home, Inc.
 7331 N. Sheridan Rd.
 Shore View Manor Convalescent Home, Inc.*
 2719 E. 75th St.
 South Shore Kosher Rest Home, Inc.
 7325 S. Exchange Ave.
 South Shore Pavilion*
 7750 South Shore Dr.
 The Sovereign Home*
 6159 N. Kenmore Ave.
 Stern's Convalescent Home, Inc.*
 730 Waveland St.
 Stewart Nursing Home, Inc.
 6710 S. Stewart Ave.
 Sunnyside Nursing Home
 4537 N. Greenview Ave.
 Sunset Nursing Home, Inc.
 7270 South Shore Dr.
 Thorndale Manor
 1020 W. Thorndale Ave.
 Uptown Convalescent Home*
 4646 N. Beacon St.
 Vincennes Manor*
 4724 S. Vincennes Ave.
 Wellington Plaza
 504 W. Wellington Ave.
 Wendt Nursing Home
 5914 N. Sheridan Rd.
 West Side Nursing Home, Inc.*
 1900 S. Kedzie Ave.
 Westwood Manor, Inc.*
 2444 W. Touhy Ave.
 Whitehall Convalescent and Nursing
 Home, Inc.*
 1901 N. Lincoln Park West
 Wincrest Nursing Home, Inc.*
 6326 N. Winthrop Ave.
 Winston Manor Convalescent and
 Nursing Home, Inc.*
 2155 W. Pierce Ave.
 Wrightwood Nursing Home, Inc.*
 2732 Hampden Ct.
 CHICAGO HEIGHTS (Cook County)
 Bel-Air Nursing Home No. 2
 309 W. 16th St.
 CHILLICOTHE (Peoria County)
 Parkhill Nursing Home
 P.O. Box 259
 CLINTON (DeWitt County)
 Crest View Nursing Home, Inc.*
 N. Clinton
 DeWitt County Nursing Home
 R.R. 1
 Pine Crest Nursing Home*
 North Center Limits
 COAL VALLEY (Rock Island County)
 Oak Glen Nursing Home
 COLCHESTER (McDonough County)
 Helton Nursing Home
 East St.
 COLLINSVILLE (Madison County)
 Pleasant Rest Nursing Home*
 614 Summit

CREAL SPRINGS (Williamson County)
 Creal Springs Nursing Home
 S. Line St.

CRESTWOOD (Cook County)
 Rest Haven Illiana Christian
 Convalescent Home, Inc.
 13259 S. Central Ave., Palos Heights

CRETE (Will County)
 Skylane Acres*
 Rt. 1, Box 359-20

DANVILLE (Vermilion County)
 Colonial Manor, Inc.
 629 Warrington Ave.
 Danville Care, Inc.
 1701 N. Bowman Ave.

Margenette*
 503 W. North St.

Nance Nursing Home
 622 Bryan Ave.

Vermilion County Nursing Home
 R.R. 1, Box 13

DECATUR (Macon County)
 American Nursing Center of Decatur*
 444 W. Harrison St.

Lakeshore Manor*
 1293 S. 34th St.

Mabel's Nursing Home
 820 North St.

Macon County Tuberculosis Sanatorium
 & Nursing Home
 400 W. Hay

Mary Ann's
 640 W. Main St.

Muirheid Nursing Home
 231 E. Condit St.

Strong's Nursing Home
 936 N. Church St.

Wakefield Aged Retreat Home
 1504 N. Water St.

Wakefield Rest Home
 800 W. McKinley Ave.

West View Nursing Home
 628 W. Main St.

DeKALB (DeKalb County)
 DeKalb County Nursing Home
 Sycamore Rd., R.R. 23

Pine Acres Retirement Center
 1212 S. Second St.

DesPLAINES (Cook County)
 Brookwood Convalescent Center, Inc.*
 Lyman and Dempster Sts.

DesPlaines Convalescent Home
 866 Lee St.

Golf Road Pavilion*
 9555 W. Golf Rd.

Graceland Home of DesPlaines, Inc.
 545 Graceland Ave.

DIXMOOR (Cook County)
 Dixmoor Villa Convalescent Home, Inc.*
 Norris and Davis Sts.

Starnes Nursing Home*
 14434 S. Hoyne Ave.

DIXON (Lee County)
 Lee County Nursing Home
 R.R. 4

Orchard Glen, Inc.*
 141 N. Court St.

Rest Haven Convalescent Home
 204 E. Third St.

DOLTON (Cook County)
 Sandra Memorial Nursing and Convalescent
 Home
 14325 S. Blackstone Ave.

DOWNER'S GROVE (DuPage County)
 Highland House Nursing Home, Inc.
 35th St. and Highland Ave.

DUNDEE (Kane County)
 Bowes Nursing Home
 305 Oregon St.

Gregg Nursing Home
 417 E. Hill St.

DUQUOIN (Perry County)
 Fair Acres Nursing Home*
 Jackson and Madison Sts.

DURAND (Winnebago County)
 Medina Nursing Center
 P.O. Box 538

EAST ST. LOUIS (St. Clair County)
 Carr Nursing Home*
 3110 Bond Ave.

Doctors' Convalescent Center, Inc.
 421 E. Broadway

Fletcher Ann Convalescent Home
 2640 St. Louis Ave.

Lively Nursing Home
 1303 Baugh Ave.

EDWARDSVILLE (Madison County)
 Anna Henry Nursing Home
 637 Hillsboro

Madison County Nursing Home
 Main St.

EFFINGHAM (Effingham County)
 Marks Nursing Home
 406 E. Jefferson

ELDORADO (Saline County)
 Eldorado Nursing Home, Inc.*
 Third and Locust Sts.

Good Shepherd Nursing Home No. 1*
 First and Jasper Sts.

ELGIN (Cook County)
 Little Angels
 Rt. 3, Box 201A Rt. 58

ELGIN (Kane County)
 Daybreak Nursing Home
 420 Douglas Ave.

Elgin-Bowes Nursing Home
 105 N. Gifford St.

Hillcrest Convalescent Home, Inc.
 4 N. Jackson St.

Isabelle Home
 104 S. State St.

Mary Margaret Manor
 134 N. McLean Blvd.

Oliver Nursing Home, Inc.*
 325 Watch St.

Raloff Nursing Home
 316 Division St.

Restville House
443 E. Chicago St.

ELMHURST (DuPage County)
Elmhurst Nursing Home
200 E. Lake St.

ELMWOOD (Peoria County)
Elm Haven, Inc.

EL PASO (Woodford County)
El Paso Nursing Home
404 E. First St.
Lewis Nursing Home, Inc.*
487 Elmwood Ct.
Tobain Nursing Home, Inc.*
469 Elmwood Ct.

EVANSTON (Cook County)
Broad Nursing Home
2001 Orrington Ave.
Broad Nursing Home
1840 Asbury Ave.
Evanston Convalescent Center, Inc.
1300 Oak Ave.
Klingler Nursing Home
2306 Ridge Ave.
Pembroke House, Inc.*
1406 Chicago Ave.
Ridge Crest Home
1708 Ridge Ave.
Three Oaks Nursing Center
500 Asbury Ave.

EVERGREEN PARK (Cook County)
Bel Air Nursing Home
9307 S. Crawford Ave.
Evergreen Gardens, Inc.*
9125 S. Crawford Ave.
Evergreen Manor Nursing Home
3327 W. 95th St.
Gunderson's Convalescent & Nursing Home
2701 W. 95th St.
Peace Memorial Home*
10124 S. Kedzie Ave.

FAIRFIELD (Wayne County)
Fair Haven
507 W. Elm St.

FARMER CITY (DeWitt County)
Farmer City Nursing Home, Inc.*
326 Clinton Ave.
Jackson Heights Nursing Home
Brookview Dr. and Crabtree Ct.

FLORA (Clay County)
Raber Nursing Home
402 E. Fourth St.

FREEBURG (St. Clair County)
Marian Nursing Home
406 State St.

FREEPORT (Stephenson County)
Benjamin Stephenson Nursing Home*
Walnut Rd.
Ortiz Nursing Center
565 N. Turner St.
Van Buren Nursing Home
503 N. Van Buren

GALATIA (Saline County)
Good Shepherd Nursing Home No. 2*
Main and Cross Sts.

GALENA (Jo Daviess County)
Sunny Hill Nursing Home
513 Bouthillier St.

GALESBURG (Knox County)
Americana Nursing Center of Galesburg*
270 E. Losey at Kellogg
Campbell Nursing Home
731 N. Seminary
Harvey Nursing Home
774 N. Broad St.
Powell Nursing Home
620 S. Academy
Schrader Nursing Home
490 N. Cherry
Sheltering Arms Nursing Home
618 Michigan Ave.

GALVA (Henry County)
Wasson Nursing Home
309 N.E. First St.

GENESEO (Henry County)
Gradert Nursing Home
426 W. First St.
Henry County Convalescent Home
R.R. 4

GENEVA (Kane County)
Anna Baum Home
115 Campbell St.

GENOA (DeKalb County)
Villa Nursing Home*
121 Main St.

GIBSON CITY (Ford County)
Gibson Community Hospital Annex
430 E. 19th St.
Gibson Manor, Inc.
525 Hazel Dr.
Williams Nursing Home
315 N. Guthrie St.

GILLESPIE (Macoupin County)
Tower View Nursing Home No. 3
703 S. Second St.

GLEN ELLYN (DuPage County)
Manor Convalescent Home, Inc.*
818 DuPage Rd.

GLENVIEW (Cook County)
Whitehaven Acres, Inc.*
Greenwood Ave. and Melody Ln.

GODFREY (Madison County)
Blu-Fountain Manor, Inc.*
Rt. 100

GRANITE CITY (Madison County)
The Colonnades
1 Colonial Dr.

GRAYVILLE (White County)
Baldwin Nursing Home, Inc.*
305 W. North St.

GREENFIELD (Greene County)
Cedar Knoll Nursing and Convalescent Home
711 Bluff St.

GREENVILLE (Bond County)
Bourgeois Nursing Home, Inc.*
100 W. College St.
Pacatte Nursing Home
102 E. College St.

- GRIDLEY (McLean County)
Dowell Nursing Home*
202 W. Sixth St.
- HAMPSHIRE (Kane County)
Hampshire Nursing Home
Jackson and Warner Sts.
Lydia Nursing Home
25 W. Jackson St.
- HARDIN (Calhoun County)
Montreat Nursing Home
R.R. 2
- HARRISBURG (Saline County)
Bacon's Nursing Home, Inc.*
Box 269, N. Granger St.
Harrisburg Nursing Home, Inc.*
1000 W. Sloan
- HARTLAND (McHenry County)
Valley Hi Nursing Home
McHenry County Home
- HARVARD (McHenry County)
Harvard Rest Home
210 E. Front St.
- HAVANA (Mason County)
Havana Nursing Home
224 W. Mound St.
Reid Nursing Home, Inc.
121 S. Orange St.
- HERRIN (Williamson County)
Hampton Nursing Home*
321 S. 14th St.
Mattingly Nursing Home, Inc.*
920 S. 14th St.
- HICKORY HILLS (Cook County)
Villa Marie Nursing Home, Inc.*
9246 S. Roberts Rd.
- HIGHLAND (Madison County)
Helvetia Nursing Home
2510 Lemon Street Rd.
Miles Nursing Home
817 Ninth St.
- HIGHLAND PARK (Lake County)
Abbott House
405 Central Ave.
- HIGHWOOD (Lake County)
Pavilion of Highland Park*
50 Pleasant Ave.
- HILLSBORO (Montgomery County)
Hillsboro Nursing Home
624 S. Main St.
- HILLSIDE (Cook County)
Oakridge Convalescent Home
323 Oakridge Ave.
- HINSDALE (DuPage County)
Griffith Nursing Home
15 W. 376 Plainfield Rd.
Oaks Nursing Home
Rt. 83 and 91st St.
Shank Rest Home
525 W. Ogden Ave.
- HOPEDALE (Tazewell County)
Hopedale Nursing Home
Second St.
- INA (Jefferson County)
Underwood Nursing Home
3 Elm St.
- IRVING (Montgomery County)
Rest Haven, Inc.*
- JACKSONVILLE (Morgan County)
Lasley Nursing Home*
844 W. College Ave.
Meline Nursing Home No. 1*
606 N. Church St.
Meline Nursing Home No. 2*
616 N. Church St.
Meline Nursing Home No. 3*
612 N. Church St.
Modern Care Convalescent and Nursing Home*
1500 W. Walnut
Smith Nursing Home*
221 E. Beecher St.
- JERSEYVILLE (Jersey County)
Garnet Nursing Home
602 W. Pearl St.
Green Lawn Nursing Home
518 S. State St.
Waters Nursing Home
408 N. Giddings St.
- JOLIET (Will County)
Americana Nursing Center of Joliet*
300 N. Madison
Broadway Nursing Home
216 N. Broadway
LeSan Nursing Home
601 Campbell St.
Lincoln Nursing Home
611 E. Cass St.
Pleasant Center Nursing Home
5 S. Center St.
Sunny Hill Nursing Home
501 Ella Ave.
- JONESBORO (Union County)
Dodd Nursing Home
Jonesboro Sq.
- KANKAKEE (Kankakee County)
Americana Nursing Center of Kankakee*
900 W. River Pl.
Casper Nursing Home
480 E. Oak St.
Deerwood Convalescent Home
R.R. 5, Aroma Park Rd.
- KNOXVILLE (Knox County)
Good Samaritan Nursing Home
407 N. Hebard St.
Knox County Nursing Home
St. Martha's Nursing Home, Inc.
N. Market St.
- LACON (Marshall County)
St. Joseph's Nursing Home
401 Ninth St.
- LaGRANGE (Cook County)
LaGrange Colonial Manor Convalescent and
Nursing Center*
339 N. Ninth Ave.
LaGrange Convalescent and Nursing Center
42 S. Ashland Ave.
- LAKE BLUFF (Lake County)
Hill Top Farm
502 N. Waukegan Rd.

LAKE VILLA (Lake County)
Hampstead House*
601 S. Rt. 59
Lake Villa Nursing Home*
201 Cedar Ave.
Venetian Manor Convalescent Home
Box 47, Rt. 4, Lindenhurst

LAKE ZURICH (Lake County)
Bee Dozier's Maple Hill Nursing Home, Inc.*
P.O. Box 288

LANSING (Cook County)
Tri-State Manor Nursing Home
2500—175th St.

LAWRENCEVILLE (Lawrence County)
Shidler Nursing Home
1022 Twelfth St.

LEBANON (St. Clair County)
Bohannon Nursing Home, Inc.
404 S. Fritz St.

LENA (Stephenson County)
Ortiz Convalescent Home
516 Schuyler St.

LEWISTOWN (Fulton County)
Stephens Nursing Home
305 S. Main St.

LIBERTYVILLE (Lake County)
Lake County Nursing Home
1125 N. Milwaukee Ave.
Wayside Home*
214 W. Park Ave.

LINCOLN (Logan County)
Abraham Lincoln Memorial Extended Care
315 Eighth St.
Christian Nursing Home*
1507 Seventh St.
Mary Henry Nursing Home*
1700 Fifth St.
Wasson Nursing Home*
1011 Third St.

LITCHFIELD (Montgomery County)
Friendly Haven Nursing Home*
823 Chapin St.
Litchfield Nursing Home*
628 S. Illinois St.

LOUISVILLE (Clay County)
Hill Crest Nursing Home
Chestnut St.

MADISON (Madison County)
Madison Nursing Home
1521 Second St.

MARENGO (McHenry County)
Florence Nursing Home
546 E. Grant Hwy.

MAROA (Macon County)
Villa Maria Nursing Home
125 S. Main St.

MARSHALL (Clark County)
Burnsides Nursing Home, Inc.
N. Second St.

MASCOUTAH (St. Clair County)
Grange Nursing Home
Tenth St. (R.R. 1, Box 145)
Mascoutah Nursing Home
213 E. Church St.

West Main Nursing Home
1244 W. Main St.

MASON CITY (Mason County)
Christian Care Nursing Home*
705 E. Chestnut St.

MATTOON (Coles County)
Cunningham Nursing Home*
1312 Wabash Ave.
Douglas Nursing Center*
State Hwy. 121W

MAYWOOD (Cook County)
Lendino Nursing Home, Inc.*
1110 S. Ninth Ave.

McHENRY (McHenry County)
Villa Nursing Home*
1201 W. Rocky Beach

McLEANSBORO (Hamilton County)
McLeansboro Nursing Home
205 E. Cherry St.

MENDOTA (LaSalle County)
Sunrise Nursing Home
1201 First Ave.

METROPOLIS (Massac County)
Metropolis Good Samaritan Home*
Box 145

MIDLOTHIAN (Cook County)
Bowman Nursing Home, Inc.
14731 S. Turner Ave.
Bowman Nursing Home, Inc., No. 1
3249 W. 147th St.
Clover Acres*
5252 W. 147th St.
Largent's Convalescent Home
4323 W. 147th St.

MILAN (Rock Island County)
Comfort Harbor Nursing Home
114 W. Second Ave.

MINONK (Woodford County)
Kirkton Nursing Home
221 Locust St.

MOLINE (Rock Island County)
Americana Nursing Center of Moline*
833 Sixteenth St.
Fairhaven Nursing Home
2525 Ninth Ave.

MONMOUTH (Warren County)
Colonial Nursing Home, Inc.
303 E. Broadway
Monmouth Nursing Home
116 S. H St.
Warren County Nursing Home
R.R. 4

MONTICELLO (Piatt County)
Cozy Haven*
713 W. Bond St.
Piatt County Nursing Home
R.R. 2

MORRIS (Grundy County)
Morris Lincoln Nursing Home*
916 Fremont Ave.
Grundy County Nursing Home
R.R. 4

MORRISON (Whiteside County)
Eveningside Nursing Home
509 N. Genesee St.

- MORRISONVILLE (Christian County)
Memorial Nursing Home*
200 W. Fifth St.
- MORTON (Tazewell County)
Morton Nursing Home
424 N. Main St.
Restmor, Inc.*
925 E. Jefferson
- MT. CARMEL (Wabash County)
Monticello Nursing Home, Inc.
Box 229
Wabash Nursing Home
R.R. 3
- MT. STERLING (Brown County)
Barker's Nursing Home*
204-206 Railroad Ave.
Haley's Nursing Home
401 W. Main St.
Whited Nursing Home
308 N. Capitol St.
- MT. VERNON (Jefferson County)
Hickory Grove Manor*
8 Doctors Park Rd.
Lowry's Nursing Home*
1304 Main St.
Setzekorn Nursing Home*
1300 Broadway
- MT. ZION (Macon County)
Woodland, Inc., Nursing Home*
- MUNDELEIN (Lake County)
North Riverwood Manor, Inc.°
Rt. 1, 106 Milwaukee Ave., Half Day
Pine Manor
Rt. 1, Box 185
- MURPHYSBORO (Jackson County)
Dillow Nursing Home
316 N. Ninth St.
Jackson County Nursing Home
1441 N. 14th St.
Tyler Nursing Home, Inc.*
1711 Spruce St.
- NAPERVILLE (DuPage County)
Americana Nursing Center of Naperville
200 Martin Dr.
Brentwood Nursing Home*
134 N. Washington St.
- NASHVILLE (Washington County)
Friendship Manor, Inc.°
Friendship Dr.
- NILES (Cook County)
Gross Point Manor
6601 Touhy Ave.
Pleasantview Convalescent and Nursing
Center, Inc.°
6840 W. Touhy Ave.
Svithiod Nursing Home
8800 Grace St.
- NORMAL (McLean County)
Americana Nursing Center of
Bloomington-Normal*
510 Broadway
Brokaw Home
Virginia and Franklin Sts.
- NORTHBROOK (Cook County)
Eden View Convalescent and Geriatric Center*
222 Frontage Rd.
Northbrook Nursing Home & Rehabilitation
Center, Inc.*
270 Skokie Rd.
- OAK LAWN (Cook County)
Concord Nursing Home*
9401 Ridgeland Ave.
Doyle Nursing and Convalescent Homes, Inc.
5432 W. 87th St.
Monticello Convalescent Center*
6300 W. 95th St.
Oak Lawn Convalescent and Geriatric Home*
9525 S. Mayfield
Parkside Gardens Nursing Home
5701 W. 79th St.
- OAK PARK (Cook County)
Oak Park Nursing Home, Inc.
637 S. Maple Ave.
Patterson Nursing & Rehabilitation Care
130 N. Austin Blvd.
Royal Oak Convalescent and Geriatric Center
625 N. Harlem Ave.
The Woodbine*
6909 W. North Ave.
- ODIN (Marion County)
Wutzler Nursing Home
Kirkwood St.
Yaw Nursing Home
Laury St.
- OKAWVILLE (Washington County)
Washington Springs Nursing Home
- OLNEY (Richland County)
Burgin Nursing Home No. 1
305 S. Washington St.
Burgin Nursing Home No. 2
607 S. Elliott
Burgin Nursing Manor*
928 E. Scott St.
Golden Years Nursing Home*
502 S. Fair St.
Marks Nursing Home*
217 N. Fair St.
- ORANGEVILLE (Stephenson County)
Krug Convalescent Home*
High St.
- OTTAWA (LaSalle County)
Hassley's Health Haven
Gentleman Rd., R.R. 4
Highland Sanatorium and Convalescent
Home of LaSalle County
800 Center St.
LaSalle County Home
R.F.D. 1
Susie H. Moore Rest and Healing Home
627 Third Ave.
- PALATINE (Cook County)
Bee Dozier's Palatine Nursing Home*
W. Dundee Rd.
Plum Grove Nursing Home, Inc.*
24 S. Plum Grove Ave.

PALOS HILLS (Cook County)
Palos Hills Convalescent Center*
10426 S. Roberts Rd.

PANA (Christian County)
DePaepe-Ashcraft Nursing Home
10 Oak St.

PARK RIDGE (Cook County)
Park Ridge Terrace*
665 Busse Hwy.

PAXTON (Ford County)
Ford County Nursing Home
R.R. 2

Lyons Nursing Home
440 E. Pells St.

PEKIN (Tazewell County)
Floy's Nursing Home
803 Park Ave.

Knollerest Nursing Home*
Allentown Rd.

PEORIA (Peoria County)
Americana Nursing Center of Peoria*
5600 Glen Elm Dr.

Baker Nursing Home*
500-502 W. Second St.

Bel-Wood Nursing Home
7023 W. Planck Rd.

High View Nursing Home*
2308 W. Nebraska St.

Mahoney Nursing Home No. 1
444 W. Second St.

Mahoney Nursing Home No. 2*
2149 N. Knoxville St.

Walker Nursing Home*
1504 W. Garden St.

PEORIA HEIGHTS (Peoria County)
Fireside House, Inc.
1629 Gardner Ln.

PERU (LaSalle County)
Heritage Manor*
22nd and Rock Sts.

Tri City Nursing Home
2804 Sixth St.

PETERSBURG (Menard County)
Menard Convalescent Center, Inc.*
Seventh and Antle Sts.

Sunny Acres
Menard County Home, Rt. 3

PITTSFIELD (Pike County)
Couch Nursing Home
521 E. Washington St.

Couch Nursing Home No. 2
531 E. Washington St.

Pittsfield Convalescent Home*
411 W. Washington St.

PLYMOUTH (Hancock County)
Myrtle Sapp's Nursing Home
Main St.

PONTIAC (Livingston County)
Livingston County Nursing Home
R.R. 1

PRAIRIE CITY (McDonough County)
Westfall K & C Nursing Home*
Reed and Union Sts.

Westfall Nursing Home*
Madison and Union Sts.

PRINCETON (Bureau County)
Prairie View Nursing Home
R.R. 5

QUINCY (Adams County)
Eloise Nursing Home
1614 N. Fourth St.

Hall Nursing Home*
1870 Vermont St.

Lincoln-Terrace Nursing Home, Inc.*
1315 N. Eighth St.

St. Joseph Hall*
1415 Vermont St.

Theda Boll Nursing Home
438 N. Twelfth St.

RAYMOND (Montgomery County)
Cottage Nursing Home*
W. Sparks St.

ROANOKE (Woodford County)
Roanoke Manor, Inc.
1102 W. Randolph St.

ROBBINS (Cook County)
Esma A. Wright Convalescent Center*
139th St. at Lydia

ROBINSON (Crawford County)
Gowen Nursing Home*
902 Mefford St.

Robinson Nursing Home*
503 E. Main St.

ROCHELLE (Ogle County)
Americana Nursing Center of Rochelle*
900 N. Third St.

ROCK FALLS (Whiteside County)
Riverview Nursing Home
308 E. Second St.

ROCKFORD (Winnebago County)
Alma Nelson Manor
550 S. Mulford Rd.

Americana Nursing Center of Rockford*
2313 N. Rockton

Deacon Home
611 N. Court St.

Johnson's Hill Top Nursing Home
728 N. Court St.

Lund Nursing Home
1503 Fourth Ave.

North Rockford Convalescent Home
1925 Fremont St.

Rockford Municipal Sanitarium Nursing Home
1601 Parkview Ave.

The Restorium
2800 S. Main St.

River Bluff Nursing Home
N. Main Rd.

Riverside Manor, Inc.*
707 W. Riverside Blvd.

Sarver Convalescent Home, Inc.
2430 S. Main St.

ROCK ISLAND (Rock Island County)
Mrs. Carroll's Nursing Home
4434 Seventh Ave.

Parkway Rest Home
557—30th St.

Shady Lawn Nursing Home, Inc.
1018 Twelfth St.

- ROSEVILLE (Warren County)
Roseville Nursing Home
N. Main St.
- ROSSVILLE (Vermilion County)
Hedrecka Nursing Home
R.R. 2
- ROUND GROVE (Whiteside County)
Whiteside County Nursing Home
- RUSHVILLE (Schuyler County)
Hills Convalescent Home*
717 E. Adams
Snyder's Home*
135 Morgan St.
- RUTLAND (LaSalle County)
Rutland Nursing Home, Inc.
E. Front St. and Chestnut St.
- ST. ELMO (Fayette County)
Elm Haven Nursing Home*
317 Cumberland Rd.
- ST. CHARLES (Kane County)
Valley Rest Home
309 S. Sixth Ave.
- SANDWICH (DeKalb County)
Sandhaven, Inc.*
517 N. Main St.
- SALEM (Marion County)
Twin Willows Nursing Center*
Rt. 37 North
- SAYBROOK (McLean County)
Kinsell's Nursing Home, Inc.*
205 N. Main St.
- SHANNON (Carroll County)
Johnson's Nursing Home
418 Ridge St.
- SHAWNEETOWN (Gallatin County)
Lorretta Nursing Home
Logan and Lincoln Sts.
- SHELBYVILLE (Shelby County)
Young's Shelbyville Restorium, Inc.*
Rt. 128 North
- SHELDON (Iroquois County)
Happy Siesta
220 E. Center St.
- SIDELL (Vermilion County)
Fairview Alliance Home, Inc.*
R.R. 1
- SILVIS (Rock Island County)
Happy Haven Rest Home
118 Tenth St.
- SKOKIE (Cook County)
Old Orchard Manor
4660 Old Orchard Rd.
Skokie Valley Manor, Inc.*
4600 Simpson St.
Village Nursing Home in Skokie, Inc.*
9000 Lavergne Ave.
- SMITHBORO (Bond County)
American Nursing Home
- SOUTH CHICAGO HEIGHTS (Cook County)
Suburban Convalescent Center*
120 W. 26th St.
- SOUTH HOLLAND (Cook County)
Colonial Convalescent Home*
549 E. 162nd St.
- SPARTA (Randolph County)
Randolph County Nursing Home
W. Belmont
- SPRINGFIELD (Sangamon County)
Americana Nursing Center of Springfield*
707 N. Rutledge
Beard Nursing Home*
925 S. Seventh St.
Carver Convalescent Home*
1527 E. Washington St.
Claudia's Nursing Home*
409 N. Grand Ave. East
Colonial Cottage
116 S. State St.
Edwards Manor Nursing Home, Inc.*
1625 E. Edwards St.
Hamilton Nursing Home*
925 N. Fifth St.
Haven Nursing Home*
2301 W. Monroe
Homestead Convalescent Home and
Nursing Residence*
127 N. Douglas Ave.
Philips Nursing Home, Inc.*
630 N. Sixth St.
Ramshaw Retirement Home No. 1*
631 N. Sixth St.
Ramshaw Retirement Home No. 2
611 N. Sixth St.
Ridgewood Nursing Home*
3400 Peoria Rd.
Rutledge Manor Care Home, Inc.*
819 N. Rutledge
Standage Nursing Home
2205 E. Capitol Ave.
- STAUNTON (Macoupin County)
Staunton Nursing Home, Inc.*
215 W. Pennsylvania St.
- STERLING (Whiteside County)
Colonial Acres Rest Home*
Rt. 2
- STOCKTON (Jo Daviess County)
Morgan Memorial Home
501 E. Front Ave.
- STREATOR (LaSalle County)
Edgetown Nursing Home
Richards and Chicago Sts.
Heritage Manor*
1525 E. Main St.
Star Haven Convalescent and Nursing Home
405 N. Wasson St.
- SULLIVAN (Moultrie County)
East View Manor Nursing Home
P.O. Box 97
Singiser Nursing Home
817 E. Jackson St.
- SUMNER (Lawrence County)
Red Hills Rest Haven, Inc.
Pine Lawn Addition
- SWANSEA (St. Clair County)
Castle Haven Convalescent Center
225 Castellano Dr.
- TAYLORVILLE (Christian County)
Dexheimer Nursing Home
216 E. Franklin St.

- Meadow Manor*
Rt. 48 North
Johnson Nursing Home
1024 W. Park
Smith's Guest Home*
305 E. Adams St.
- TINLEY PARK (Cook County)
Kosary Nursing Home
6660 W. 147th St.
McAllister Nursing Home No. 2
183rd and LaVerne Ave.
- TOULON (Stark County)
Public Nursing Home
219 S. Franklin St.
- TREMONT (Tazewell County)
Tazewell County Nursing Home
R.R. 1
- TROY (Madison County)
Rockwood Rest Home*
212 N. Powell St.
- TUSCOLA (Douglas County)
Martin Nursing Home*
114 E. Daggy St.
- URBANA (Champaign County)
Champaign County Nursing Home
1701 E. Main St.
Hubert Nursing Home
505 W. Green St.
- VANDALIA (Fayette County)
Fayette County Hospital Annex
727 W. Jackson
Fayette County Nursing Home
R.R. 3
Ted Mangner Nursing Home*
117 S. Seventh St.
- VIENNA (Johnson County)
Hill View
- VILLA GROVE (Douglas County)
Maple Rest Home
710 E. Elm St.
- VILLA PARK (DuPage County)
Acre View Nursing Home
538 S. Villa Ave.
- VIRDEN (Macoupin County)
Miller's Nursing Home*
231 E. Deane St.
- VIRGINIA (Cass County)
Kirkpatrick Nursing Home
145 N. Front St.
Walker Nursing Home
530 E. Beardstown St.
- WARREN (Jo Daviess County)
Daters Nursing Home
Water St.
Lahey Nursing Home
Burnett St.
Sunnyside Nursing Home
206 Lions St.
- WASHBURN (Woodford County)
Atteberry Nursing Home
231 Parkside Dr.
- WASHINGTON (Tazewell County)
Washington Nursing Center*
1110 New Castle Rd.
- Washington Home*
104 E. Holland St.
- WATERLOO (Monroe County)
Monroe County Nursing Home
Illinois Ave.
- WATSEKA (Iroquois County)
Iroquois Resident Home
830 S. Fourth St.
- WAUKEGAN (Lake County)
The Terrace Nursing Home*
1615 Sunset Ave.
Waukegan Pavilion Nursing Home, Inc.*
2217 W. Washington St.
- WAVERLY (Morgan County)
Bridges Nursing Home
200 E. State St.
- WENONA (Marshall County)
Wenona Rest Haven, Inc.
Elm St.
- WEST CHICAGO (DuPage County)
Hazelhurst Nursing Home, Inc.
Roosevelt Rd. and Gary Mill
Morton Manor Health Home
R.R. 1, Box 753
- WHEATON (DuPage County)
DuPage County Convalescent Home
County Farm Rd.
Wheaton Health Resort, Inc.
1325 Manchester Rd.
- WHITE HALL (Greene County)
Hill Top Haven*
McCarthy Ave. and U.S. Rt. 67A
- WINFIELD (DuPage County)
Abbey Winfield Geriatric & Convalescent Home
Wynwood Rd. and Shady Way
Zace Retirement Home
27 W 141 Liberty St.
- WITT (Montgomery County)
Laura Charles Nursing Home, Inc.*
Allen St.
- WOOD DALE (DuPage County)
Wood Dale Nursing Home
140 Hemlock
- WOODSTOCK (McHenry County)
Birchwood Nursing Home
R.R. 1
New Woodstock Residence*
309 McHenry Ave.
- YORKVILLE (Kendall County)
Hillside Nursing and Convalescent Home, Inc.*
Rt. 34 and Game Farm Rd.
Hillside Nursing and Convalescent
Home, Inc., No. 2
Rt. 34 and Prairie Ln.
- ZION (Lake County)
Golden Day Nursing Home
923 Shiloh Blvd.
Parkview Nursing Home, Ltd.
1911—27th St.
Zion Nursing Home
2561 Sheridan Rd.

*Member of Illinois Nursing Home Association

SHELTERED CARE HOMES

ALEDO (Mercer County)

Fortner Sheltered Care Home
1006 E. Fifth St.

ALTON (Madison County)

Alby Street Sheltered Care Home
1912 Alby St.
West Shelter Care Home*
1914 Washington Ave.
Mitchell Sheltered Care Home
1800 Belle St.
Stahl Shelter Care Home
1414 Milton St.

ANNA (Union County)

Dodson Shelter Care Home
300 South St.
Galbraith Home
223 W. Vienna St.
HS&D Sheltered Care Home
201 E. High St.
Melvin's Sheltered Care Home
612 E. Davie St.
Pitts Sheltered Care Home
310 E. Davie St.

ARROWSMITH (McLean County)

Murrell's Guest Home

ASHLAND (Cass County)

Burch Home

ASHMORE (Coles County)

Ashmore Estates

BARRY (Pike County)

Tittsworth Sheltered Care Home
Rogers St.

BELLEVILLE (St. Clair County)

Cerneka Sheltered Care Home
404 N. Charles St.
Gorski Old Folks Home
1412 W. Main St.
Heidelberg Retirement Home
200 Abend St.
Gribler Sheltered Care Home
511 S. Charles St.
Weier Retirement Home
5 Gundlach Pl.

BENTON (Franklin County)

Cockrum Sheltered Care Home
314 S. Main St.
Good Samaritan Sheltered Care Home
904 E. Main St.
Higgerson's Home
209 N. Eighth St.
Severin Sheltered Care Home
105 Mill St.
Shady Rest Sheltered Care
114 E. Webster St.
Wertz's Sheltered Care Home
217 Pope St.

BETHANY (Montrier County)

White Shelter Care Home
513 E. Main St.

BLOOMINGTON (McLean County)

Eden's Sheltered Care Home
1108 N. Prairie St.

Golden Age Home

412 N. Roosevelt Ave.

Hanson Sheltered Care Home

909 S. Center St.

Lowry Shelter Care Home

903 W. Mulberry St.

Rusk Haven Shelter Home

102 Greenwood Ave.

BRADFORD (Stark County)

Bradford Home

214 E. Main St.

BRADLEY (Kankakee County)

Evans Shelter Care Home

496 S. Wabash St.

BRIGHTON (Jersey County)

Post Sheltered Care Home

Strack St., P.O. Box 161

BUNKER HILL (Macoupin County)

Hammond Shelter Care Home

512 S. Franklin

BUSHNELL (McDonough County)

Daly's Golden Age Home

257 E. Hail St.

CARLINVILLE (Macoupin County)

Henry Sheltered Care Home

323 Sumner St.

CAMBRIDGE (Henry County)

Pine Lodge Home

112 E. Center St.

CANTON (Fulton County)

Sunset Home

135 S. First St.

Sunset Sheltered Care Home No. 2

129 S. First Ave.

CARTHAGE (Hancock County)

Welborn Shelter Care Home No. 2

140 Main St.

CASEY (Clark County)

Rude's Goodwill Shelter Home

110 E. Monroe St.

CENTRALIA (Marion County)

Brewer Shelter Care Home

603 N. Walnut St.

Centralia Friendship House, Inc.

1000 McCord St.

Centralia Shelter Care

620 E. Broadway

CHEBANSE (Iroquois County)

Morgan Manor

243 S. First St.

CHAMPAIGN (Champaign County)

Painter's Sheltered Care Home

406 S. Prairie St.

CHARLESTON (Coles County)

Teaters Sheltered Care Home

Fifth and Jackson Sts.

Young Sheltered Care Home

763 Tenth St.

CHENOA (McLean County)

Rose Lawn Sheltered Care Home No. 2

324 Weir St.

CHESTER (Randolph County)

Padgett's Pot-A-Pourri Rest Home

647 State St.

CHICAGO (Cook County)
Jewish Peoples Convalescent Home
6512 N. California Ave.
Kraus Home, Inc.
1620 W. Chase Ave.

CLINTON (DeWitt County)
Burns Sheltered Care
930 N. George

COBDEN (Union County)
Tripp Sheltered Care Home
Box 323

COLLINSVILLE (Madison County)
Butler Home
413 Vandalia St.

COULTERVILLE (Randolph County)
Coulterville Sheltered Care Home
Seventh and Cedar Sts.

DALLAS CITY (Henderson County)
Welborn Sheltered Care Home
69 E. Main St.

DANVERS (McLean County)
Holman Shelter Care Home
300 E. Exchange St.

DECATUR (Macon County)
Farrar Sheltered Care Home
1860 N. Broadway St.
Gladville Home
1013 W. Wood St.
Herr Shelter Care Home
328 N. Edwards St.
Lindsey Rest Home
737 W. Wood St.

DONGOLA (Union County)
Keller Sheltered Care Home
Box 634

DUQUOIN (Perry County)
Miller Sheltered Care Home
24 S. Line St.

DWIGHT (Livingston County)
Open Arms Shelter
200 N. Franklin

EAST ST. LOUIS (St. Clair County)
Carr Sheltered Care Home
3112 Bond St.
Park Retirement Home
2246 N. 57th St.
Popejoy's Retirement Home
1504 Illinois Ave.

EFFINGHAM (Effingham County)
Ireland Sheltered Care Home
111 Forest St.
Marks Sheltered Care Home
500 Clinton Ave.

ELDORADO (Saline County)
Murray Hotel
900 Fifth St.

ELGIN (Kane County)
The Oliver Annex
364 St. Charles St.
Restville House Unit 2
15-17 S. Channing St.

EL PASO (Woodford County)
Elderly Citizens Home
Main St.

ENFIELD (White County)
Fields Shelter Care Home
W. Main St.

FLORA (Clay County)
Anderson's Sheltered Care Home
201 E. Third St.
Cottengaim Shelter Care
215 W. Second St.
Ferguson Sheltered Care Home
520 W. North Ave.
Raber Sheltered Care Home
409 E. Third St.

GALESBURG (Knox County)
Barre's Sheltered Care Home
1179 E. Main St.
Clay Sheltered Care Home
319 W. North St.
The Evergreens
1188 W. Main St.
Lee's Sheltered Care Home
736 N. Kellogg St.

GOLCONDA (Pope County)
Millis Sheltered Care
Monroe St.
Rose View Sheltered Care Home
Washington and Harrison Sts.

GRAYVILLE (White County)
Hillcrest Home
320 W. South St.

GREENUP (Cumberland County)
Peter's Sheltered Care Home
308 N. Kentucky St.

GREENVILLE (Bond County)
Hilltop House
202 N. Fourth St.
Horsfall Sheltered Care Home
201 S. Second St.

HARDIN (Calhoun County)
Hardin Sheltered Care Home
County Road St.

HERRIN (Williamson County)
Mattingly Sheltered Care Home
700 N. 14th St.
Park Avenue Sheltered Care Home
Rt. 148, P.O. Box 68

HEYWORTH (McLean County)
Lush Sheltered Care Home
303 E. Main St.

IRVING (Montgomery County)
Mi-Edd Shelter Home

JACKSONVILLE (Morgan County)
Bell Sheltered Care Home
602 Jordan St.
Blue Sheltered Care Home
506 W. Morton Ave.
Hardy Sheltered Care Home
830 W. College Ave.
Hoots Rest Home
717 E. Douglas St.
Parker Sheltered Care Home
203 W. Beecher Ave.
Rosedale Sheltered Care Home
220 Brown St.

- JERSEYVILLE (Jersey County)
Gibson Shelter Care
301 W. Pine St.
Stark's Sheltered Care Home
600 N. Liberty St.
- JOHNSTON CITY (Williamson County)
Cazaleen's Sheltered Care Home
207 E. Fifth St.
Maple House Shelter Care
207 E. Third St.
Nellie Ernfeldt Home
R.R. 1
- JONESBORO (Union County)
Choate Sheltered Care Home
405 Broad St.
Gibbs Sheltered Care Home
204 S. Pecan St.
Henard Sheltered Care Home
204 S. Main St.
- KAMPSVILLE (Calhoun County)
Smith Sheltered Care Home
- KANKAKEE (Kankakee County)
Bethel Shelter Home
556 E. Oak St.
Geeding Shelter Home
139 S. Greenwood Ave.
Oaklawn Home
191 N. Washington Ave.
Oaks Shelter Home
453 E. Chestnut St.
J. C. Good Shelter Home
195 N. Entrance Ave.
- KEWANEE (Henry County)
Lofgren Duncan Manor
218 S. Tremont St.
- LaHARPE (Hancock County)
Gillett Home
W. Main St.
Gillett Home No. 2
W. Main St.
Wells Sheltered Care Home
200 Archer Ave.
- LeROY (McLean County)
LeRoy Home
902 N. Mill St.
- LEXINGTON (McLean County)
Rose Lawn Shelter Care Home
207 N. Elm St.
Three Oaks Sheltered Care Home
306 W. South St.
- LOUISVILLE (Clay County)
Twilight Haven
Hiriam St. & Rt. 45
- LOVINGTON (Moultrie County)
Gaddis Sheltered Care Home, Inc.
240 E. State St.
- MANTENO (Kankakee County)
Wooley's Home
272 W. Fourth St.
- MARION (Williamson County)
Lee Manor
1305 W. Main St.
Miner Shelter Care Home
205 E. Marion St.
- MARSHALL (Clark County)
Dunkel Home
325 S. Sixth St.
Marshall Christian Hotel
805 Archer Ave.
- MARTINSVILLE (Clark County)
Glendening Home
25 S. Washington St.
- McHENRY (McHenry County)
Shan Gra-La Sheltered Care Home
3820 W. Idyldell Rd.
- METROPOLIS (Massac County)
Angelly Sheltered Care
202 Metropolis St.
Care Homes, Inc.
205 Metropolis St.
Senior Citizens Retirement Home
308 W. Third St.
- MILFORD (Iroquois County)
Golden Jubilee Home
28 S. West Ave.
- MOLINE (Rock Island County)
Hendren's Sheltered Care Home
2602 Sixth Ave.
Hensley Home
1111 Fifteenth St.
Paul's Boarding Home
849 Fifteenth St.
- MOMENCE (Kankakee County)
Momence Shelter Home
229 E. Indiana Ave.
- MONMOUTH (Warren County)
Galusha Sheltered Care Home
323 N. Second St.
- MT. CARMEL (Wabash County)
Chestnut Sheltered Care Home
218 Chestnut
Ladies Lodge
318 W. Second St.
Shurtleff Annex
416 Plum St.
Shurtleff Shelter Care Cottage
429 E. Fifth St.
- MT. OLIVE (Macoupin County)
Albert Sheltered Care Home
101 W. Fourth St.
- MT. STERLING (Brown County)
Mt. Sterling Sheltered Care
117 E. South St.
- MT. VERNON (Jefferson County)
Hearthside Sheltered Care Home
318 N. Ninth St.
- MULBERRY GROVE (Bond County)
Smith's Sheltered Care Home
111 S. Maple St.
- MURPHYSBORO (Jackson County)
River Bend Manor
1501 Shomaker Dr.
- NEWTON (Jasper County)
duMont Sheltered Care Home
438 S. Lafayette St.
- OBLONG (Crawford County)
Fouty's Sheltered Care Home
507 S. Garfield St.

Hart Sheltered Care
 403 N. Range St.
 Oblong Sheltered Care Home
 106 N. Garfield St.
 ODELL (Livingston County)
 The Odell Shelter, Inc.
 17 Henry St.
 O'FALLON (St. Clair County)
 Andricks Shelter Care
 135 Main St.
 OLD MARISSA (St. Clair County)
 Old Marissa Sheltered Care Home
 OLNEY (Richland County)
 Braden Sheltered Care
 230 E. North Ave.
 Colonial Manor Sheltered Care
 327 S. Morgan St.
 Marks Sunset Manor
 1044 Whittle
 Miller Sheltered Care Home
 103 E. Lafayette St.
 Rachel Moore Shelter Care
 413 S. Morgan
 ONARGA (Iroquois County)
 Jones Sheltered Care
 317 N. Walnut
 OQUAWKA (Henderson County)
 Oquawka Shelter Home
 PALMYRA (Macoupin County)
 Light House Shelter
 PARIS (Edgar County)
 Colonial Home
 623 N. Central Ave.
 Matthews Sheltered Care Home
 414 Douglas St.
 Sanders Sheltered Care Home
 813 Tenbrook
 PAW PAW (Lee County)
 Pfeiffer Sheltered Care Home
 PEORIA (Peoria County)
 Senior Citizens Sheltered Care Home
 302 W. Third St.
 Waldo Home
 405 N. Perry
 PERU (LaSalle County)
 Hillview Manor
 2106 Market St.
 PLANO (Kendall County)
 Wesley Haven, Inc.
 218 N. Center
 PLYMOUTH (Hancock County)
 Thomas Sheltered Care Home
 Box 323
 PONTIAC (Livingston County)
 Northerest Manor
 732 N. Mill St.
 PRINCEVILLE (Peoria County)
 Seven Oaks
 Douglas and Tremont Sts.
 QUINCY (Adams County)
 Bacon Sheltered Care Home
 1435 N. Fifth St.
 Beaver Sheltered Care Home
 327 Elm St.
 Frances Shelter Care Home
 431 Locust St.
 Sims Shelter House
 1619 N. Fourth St.
 ROCHELLE (Ogle County)
 Joyce Old Folks Home
 609 N. Sixth St.
 ROCKFORD (Winnebago County)
 Bethany House
 412 N. Court St.
 Parkview Sheltered Care Home
 408 N. Horsman St.
 ROODHOUSE (Greene County)
 Dameron Shelter Care Home
 114 E. Palm St.
 RUSHVILLE (Schuyler County)
 Lacey's Sheltered Care Home
 239 W. Clay St.
 ST. ANNE (Kankakee County)
 Good Sheltered Care Home
 392 W. Station
 Good Sheltered Care Home No. 1
 391 W. Station
 ST. JACOB (Madison County)
 Nolan Sheltered Care Home
 R.R. 1
 SALEM (Marion County)
 Hogge's Sheltered Care Home
 521 E. Church St.
 SANDOVAL (Marion County)
 Finn's Sheltered Care Home
 W. North Second St.
 SAYBROOK (McLean County)
 Maplebrook
 Main St.
 SESSER (Franklin County)
 Nixt Sheltered Care Home
 303 W. Mathew
 SHELDON (Iroquois County)
 Sheldon Sheltered Home
 170 W. Concord
 SPARTA (Randolph County)
 Krisby Shelter Home
 411 S. St. Louis St.
 SPRINGFIELD (Sangamon County)
 Gannar Cerebral Palsy Home
 910 S. Second St.
 Lane Bryant Retirement Home
 1712 E. Washington St.
 Mayol Sheltered Care Home
 723 E. Reynolds St.
 Peart Sheltered Care Home
 1010 S. Second St.
 Sunshine Guest Home
 607 S. Fifth St.
 Tomlin Retirement Home
 609 N. Fourth St.
 STOCKTON (Jo Daviess County)
 Brog's Sheltered Care Haven
 205 E. Benton St.
 STREATOR (LaSalle County)
 Hillview Sheltered Care Home
 518 S. Bloomington St.

SULLIVAN (Moultrie County)

Beals Sheltered Care Home

13 S. McClellan St.

SYCAMORE (DeKalb County)

The Driscoll Home

309 N. California

TALLULA (Menard County)

Garden View

N. Ewing

THOMSON (Carroll County)

Maple Lawn Home

TILTON (Vermilion County)

Smoot Memorial Home

215 W. Sixth St.

Mrs. Etta R. Wangler Anderson

Sheltered Care Home

605 E. Fifth St.

URBANA (Champaign County)

Lustig Sheltered Care Home

904 W. Clark St.

VIRGINIA (Cass County)

Virginia Sheltered Care Home

132 E. Illini St.

WARSAW (Hancock County)

Carlson Sheltered Care Home

150 Main St.

WATSEKA (Iroquois County)

Pleasant Lodge

590 E. Grant St.

WAUKEGAN (Lake County)

Marseilles Retirement Home, Inc.

604 N. Genesee St.

WAVERLY (Morgan County)

Witt Sheltered Care Home

405 S. Miller St.

WEST FRANKFORT (Franklin County)

Peacock Sheltered Care Home

309 W. Oak St.

Rankin Sheltered Care Home

312 E. Fourth St.

Smith Sheltered Care Home

512 S. Cherry St.

Wood Sheltered Care Home

609 S. Monroe

WEST SALEM (Edwards County)

Golden Acres, Inc.

WHITE HALL (Greene County)

Bateman Sheltered Care Home

535 N. Main St.

Elliott Sheltered Care Home

601 N. Main St.

Powell Sheltered Care Home

144 E. Lincoln St.

Shanahan Sheltered Care Home

431 Centennial St.

WINCHESTER (Scott County)

Oak Rest Sheltered Care Home

206 High St.

YORKVILLE (Kendall County)

Himes Sheltered Care Home

N. Bridge St.

ZION (Lake County)

Robbins Home

3220 Emmans Ave.

HOMES FOR THE AGED

In this section, the following symbols are used:
A—sheltered care facilities, B—nursing care facilities, and C—special geriatric facilities.

ALHAMBRA (Madison County)

Hitz Memorial Home—AB

Belle St.

ALTON (Madison County)

Alton Woman's Home—A

2224 State St.

The Loretto Home—A

417 Prospect St.

ARLINGTON HEIGHTS (Cook County)

Lutheran Home and Service for the Aged—AB

800 W. Oakton St.

AURORA (Kane County)

Jennings Terrace—AB

275 S. LaSalle St.

Sunnymere, Inc.—AB

925 Sixth Ave.

BELLEVILLE (St. Clair County)

Meredith Memorial Home—A

Public Square

St. Elizabeth's Home for the Aged—AB

211 S. Third St.

St. Paul's Home—AB

1021 W. "E" St.

BENSENVILLE (DuPage County)

Bensenville Home Society—AB

York and Memorial Dr.

BROOKFIELD (Cook County)

The British Home—AB

31st and McCormick Ave.

CANTON (Fulton County)

Nancy and Ann Kelley Home for the Aged—A

344 W. Chestnut St.

CARLYLE (Clinton County)

St. Mary's Home for the Aged—A

501 Clinton St.

CHAMPAIGN (Champaign County)

The Garwood Home—A

1515 N. Market St.

CHESTER (Randolph County)

St. Ann's Home—B

770 State St.

CHICAGO (Cook County)

Augustana Home for the Aged—AB

7540 Stony Island Ave.

Bethany Home—AB

5015 N. Paulina St.

Bohemian Home for the Aged—AB

5061 N. Pulaski Rd.

Chicago Holland Home for the Aged—AB

240 W. 107th Pl.

Church Home for Aged Persons—AB

5435-45 Ingleside Ave.

Cosmopolitan Community Home—A

51 E. 53rd St.

Covenant Home—AB

2725 W. Foster Ave.

Drexel Home, Inc.—ABC

6140 Drexel Ave.

Fridhem Baptist Home—AB

11404 S. Bell Ave.

George J. Goldman Memorial Home for the
Jewish Aged—AB
1152 W. Farwell Ave.
Home of the Association of Jewish Blind—A
3525 W. Foster Ave.
Jane Dent Home—A
4430-32 Vincennes Ave.
Jewish Home for the Aged—ABC
1648 S. Albany Ave.
Little Sisters of the Poor—AB
5148 Prairie Ave.
Methodist Old Peoples Home—AB
1415 Foster Ave.
Midwest Baptist Home, Inc.—AB
3055 W. Washington Blvd.
Northwest Home for the Aged—AB
2201 N. Sacramento Ave.
Norwegian Lutheran Bethesda Home—AB
2833 N. Nordica Ave.
Norwood Park Home—AB
6016 N. Nina Ave.
The Old People's Home of the City of
Chicago—AB
909 Foster Ave.
Park View Home—ABC
1401 N. California Ave.
Sacred Heart Home—AB
1550 S. Albany Ave.
St. Augustine—AB
2358 N. Sheffield Ave.
St. Joseph's Home for the Aged—AB
2650 N. Ridgeway Ave.
St. Paul's House—A
3831 N. Mozart St.
Selfhelp Home for the Aged—AB
4941 S. Drexel Blvd.
Society for the Danish Old People's Home—AB
5656 N. Newcastle Ave.
Washington and Jane Smith Home—ABC
2340 W. 113th Pl.
DANVILLE (Vermilion County)
Webster Memorial Home—A
903 N. Logan Ave.
DECATUR (Macon County)
Anna B. Millikin Home—A
200 N. Oakland Ave.
ELBURN (Kane County)
Fellowship Deaconry—A
526 N. Main St.
ELGIN (Kane County)
Oak Crest Residence—AB
204 S. State St.
EUREKA (Woodford County)
Apostolic Christian Home at Eureka*—AB
610 W. Cruger St.
Maple Lawn Homes—AB
Box 37, R.R. 2
EVANSTON (Cook County)
Alonzo Mather Aged Ladies Home—AB
1615 Hinman Ave.
The Georgian, Division of Methodist Old
Peoples Home—AB
422 Davis St.
Homecrest Foundation—A
1430 Chicago Ave.
James C. King Home for Old Men—AB
1555 Oak Ave.
Lake Crest Villa—A
2601 Central St.
Pioneer Place—AB
2320 Pioneer Rd.
Presbyterian Home—AB
3200 Grant St.
FAIRBURY (Livingston County)
Fairview Haven, Inc.—AB
605-609 N. Fourth
FOREST PARK (Cook County)
Altenheim (German Old Peoples Home)—AB
7824 Madison St.
FREEPORT (Stephenson County)
Freeport-Bensenville Home—A
822 W. Stephenson St.
Park View Home—A
South Park Blvd.
St. Joseph Home for the Aged—AB
649 E. Jefferson St.
GIRARD (Macoupin County)
The Home—A
GLENVIEW (Cook County)
Maryhaven Village for Aged and Blind*—AB
1700 E. Lake Ave.
GOLDEN (Adams County)
Golden Good Shepherd Home, Inc.*—AB
GURNEE (Lake County)
Independent Order of Vikings Home for
Aged Members—AB
Grand Ave.
HIGHLAND (Madison County)
Highland Home—A
1600 Walnut St.
HIGHLAND PARK (Lake County)
Villa St. Cyril—AB
111 St. Johns Ave
HINSDALE (Cook County)
King-Bruwaert House—AB
6101 County Line Rd.
HINSDALE (DuPage County)
Godair Home—AB
6259 S. Madison St.
JACKSONVILLE (Morgan County)
Illinois Christian Home, Inc.—AB
873 Grove St.
JOLIET (Will County)
Our Lady of Angels Retirement Home—AB
1201 Wyoming Ave.
St. Patrick Retirement Hotel—AB
22 E. Clinton St.
Salem Home for the Aged—AB
1313 Rowell Ave.
JUSTICE (Cook County)
Rosary Hill Convalescent Home—AB
9000 W. 81st St.
KEWANEE (Henry County)
St. Bernadette Manor—A
Elliott St.
The Whiting Home—B
320 S. Chestnut St.
KNOXVILLE (Knox County)
Illinois P.E.O. Home—A
415 E. Main St.

- LaGRANGE PARK (Cook County)
Plymouth Place—AB
315 N. LaGrange Rd.
- LAKE VILLA (Lake County)
American Aid and Old Peoples Home
Society—A
Grand Ave.
- LAWRENCEVILLE (Lawrence County)
The Methodist Home—AB
1601 S. Sixteenth St.
- LEMONT (Cook County)
Holy Family Villa—AB
123rd St.
Mother Theresa Home—AB
1270 Main St.
- LIBERTYVILLE (Lake County)
St. John's of Allendale—A
59A and Milwaukee Rd.
- LINCOLN (Logan County)
Deaconess Memorial Home Annex—A
315 Eighth St.
- MACOMB (McDonough County)
Everly House—A
811 S. Lafayette St.
- MACON (Macon County)
Eastern Star Home at Macon—AB
- MATTOON (Coles County)
Illinois I.O.O.F. Old Folk's Home—AB
E. Lafayette St.
- MAYWOOD (Cook County)
Maywood Baptist Home—AB
316 Randolph St.
Maywood Home for Soldiers Widows—A
224 N. First Ave.
- MEADOWS (McLean County)
Meadows Mennonite Home—A
- MENDOTA (LaSalle County)
Mendota Lutheran Home—AB
504 Sixth St.
- MORRISON (Whiteside County)
Resthaven Home of Whiteside County—A
Maple Ave.
- MORTON GROVE (Cook County)
Bethany Terrace Retirement and Nursing
Home—AB
8425 N. Waukegan Rd.
- MT. CARROLL (Carroll County)
Caroline Mark Home—A
222 E. Lincoln St.
- MT. MORRIS (Ogle County)
Pinecrest Manor—AB
414 S. McKendrie Ave.
- NEW ATHENS (St. Clair County)
New Athens Home—AB
203 S. Johnson St.
- NILES (Cook County)
St. Andrew Home for the Aged—AB
7000 N. Newark Ave.
St. Benedict's Home for the Aged—AB
6930 W. Touhy Ave.
- NORMAL (McLean County)
Shamel Manor—A
509 N. Adelaide
- NORRIDGE (Cook County)
Central Baptist Home for the Aged—AB
7901 W. Lawrence Ave.
- NORTH LAKE (Cook County)
Villa Scalabrini—AB
Wolf Rd. and Palmer St.
- NORTH RIVERSIDE (Cook County)
Scottish Old Peoples Home—AB
28th St. and DesPlaines Rd.
- OTTAWA (LaSalle County)
Cora J. Pope Home—A
116 W. Prospect St.
Pleasant View Luther Home—AB
505 College Ave.
- PARK RIDGE (Cook County)
St. Matthew Lutheran Home—AB
1601 N. Western Ave.
- PAXTON (Ford County)
Illinois Knight Templar Home for the
Aged Infirm—B
706 S. Washington St.
- PEORIA (Peoria County)
Apostolic Christian Home—A
711 N.E. Monroe Ave.
Christian Buehler Memorial Home—AB
3415 N. Sheridan Rd.
Guyer Memorial Home—A
201 W. Columbia Terr.
John C. Proctor Endowment Home—AB
1301 N.E. Glendale Ave.
St. Joseph's Home for the Aged—AB
2223 W. Heading Ave.
- PEOTONE (Will County)
Peotone Bensenville Home—AB
Wood and West Sts.
- PONTIAC (Livingston County)
Evenglow Lodge—A
201 E. Washington St.
Humiston Haven—AB
300 W. Lowell St.
- PRINCETON (Bureau County)
Adeline E. Prouty Home—A
508 Park Ave. East
- QUINCY (Adams County)
Anna Brown Home for the Aged—AB
1507 N. Fifth St.
Good Samaritan Home—AB
2130 Harrison St.
Methodist Sunset Home—AB
418 Washington St.
St. Vincent's Home—A
1340 N. Tenth St.
- ROCKFORD (Winnebago County)
Eastern Star Home of Rockford—AB
2400 S. Main St.
P. A. Peterson Home—AB
1301 Parkview Ave.
Winnebago Home for the Aged—AB
Box 2, Safford Rd.
- ROCK ISLAND (Rock Island County)
Cleaveland Home for the King's Daughters
of Illinois, Inc.—A
805 Nineteenth St.

Huber Memorial Home—A
1000—30th St.
SPRINGFIELD (Sangamon County)
Carrie Post King's Daughters Home
for Women—A
541 Black Ave.
Illinois Presbyterian Home—A
W. Lawrence at Chatham Rd.
Mary Bryant Home for the Blind—A
1100 S. Fifth St.
St. Joseph's Home for the Aged—A
S. Sixth Street Rd.
SULLIVAN (Moultrie County)
Illinois Masonic Home—AB
Rt. 121E
TECHNY (Cook County)

St. Ann's Home and Infirmary—AB
Waukegan Rd.
VIRDEN (Macoupin County)
Mothers' Memorial Baptist Home—AB
402 W. Loud St.
WHEELING (Cook County)
Addolorata Villa—AB
Hwy. 83, McHenry Rd.
WILMETTE (Cook County)
Baha'i Home—A
401 Greenleaf Ave.
Maryhaven, Inc.—AB
2228 Beechwood Ave.
WOODSTOCK (McHenry County)
Sunset Manor, Inc.—AB
920 Seminary Ave.
*Member Illinois Nursing Home Association

PRE-POSITIONED PACKAGED DISASTER HOSPITALS IN ILLINOIS (AS OF JUNE 22, 1966)

ALTON (Madison County)
Alton State Hospital
ANNA (Union County)
Anna State Hospital
ASHKUM (Iroquois County)
Lawson Contracting Co.
AURORA (Kane County)
East Aurora High School
BARTONVILLE (Peoria County)
Bartonville Civil Defense Center
CAIRO (Alexander County)
City of Cairo Warehouse
CARLINVILLE (Macoupin County)
Business Bldg.
CENTRALIA (Marion County)
Chapel Bldg.
CHAMPAIGN (Champaign County)
Illinois Power Co.
CHARLESTON (Coles County)
Eastern Illinois University
Jefferson Junior High School
CHICAGO HEIGHTS (Cook County)
City Hall
DANVILLE (Vermilion County)
St. Elizabeth's Hospital
DECATUR (Macon County)
County Courthouse
DIXON (Lee County)
Dixon State School
DU QUOIN (Perry County)
Marshall Browning Hospital
EDWARDSVILLE (Madison County)
LeClair Grade School
ELDORADO (Saline County)
Lincoln Grade School
ELGIN (Kane County)
Elgin State Hospital
ERIE (Whiteside County)
Erie Community High School
FLORA (Clay County)
Old Light and Power Plant Bldg.

GALESBURG (Knox County)
Galesburg State Research Hospital
Knox County Court House
GARDNER (Grundy County)
Garfield Township Building
HAVANA (Mason County)
Chicago and Illinois Railroad Depot
HIGHLAND PARK (Lake County)
Highland Park Water Plant
HINES (Cook County)
Veterans Administration Hospital
JACKSONVILLE (Morgan County)
Jacksonville State Hospital
JERSEYVILLE (Jersey County)
Jersey County Court House
JOLIET (Will County)
Barrett Hardware
KANKAKEE (Kankakee County)
Park Division Garage
LINCOLN (Logan County)
Lincoln State School
City of Lincoln Warehouse
MANTENO (Kankakee County)
Manteno State Hospital
Our Lady's Academy
MATTOON (Coles County)
Moody Manufacturing Co.
METROPOLIS (Massac County)
Power and Light Bldg.
MT. CARMEL (Wabash County)
Courthouse
MURPHYSBORO (Jackson County)
Courthouse
NORMAL (McLean County)
Illinois Soldiers' and Sailors'
Children's Hospital
OAK FOREST (Cook County)
Oak Forest Hospital
OLNEY (Richland County)
Richland County Court House

OQUAWKA (Henderson County)
 Old Opera House
 OTTAWA (LaSalle County)
 Libby Owens Ford Glass Plant
 PALATINE (Cook County)
 Police Station
 PANA (Christian County)
 Pana Township Building
 PARIS (Edgar County)
 Houston Bldg.
 PEKIN (Tazewell County)
 Pekin Community High School
 PEORIA (Peoria County)
 Carson Pirie Scott & Co.
 C.D. Center, Abbott Center
 PONTIAC (Livingston County)
 Nursing Home, RR #1
 PRINCETON (Bureau County)
 City Hall
 QUINCY (Adams County)
 Illinois Soldiers' and Sailors' Home

ROCKFORD (Winnebago County)
 Whitehead Elementary School
 RUSHVILLE (Schuyler County)
 Scripps Park Country Club
 SAVANNA (Carroll County)
 Savanna Ordnance Depot
 SKOKIE (Cook County)
 G. D. Searle and Co.
 STERLING (Whiteside County)
 City Hall
 ST. CHARLES (Kane County)
 Pottawatomie Park Band Stand
 TUSCOLA (Douglas County)
 Douglas County Court House
 WATERLOO (Monroe County)
 Monroe County Nursing Home
 WEST FRANKFORT (Franklin County)
 Franklin County Civil Defense Center
 WHEATON (DuPage County)
 DuPage County Convalescent Home

TRAINING PACKAGED DISASTER HOSPITALS IN ILLINOIS (AS OF JUNE 22, 1966)

BELLEVILLE (St. Clair County)
 1505 Caseyville Ave.
 CARBONDALE (Jackson County)
 Southern Illinois University
 CHICAGO (Cook County)
 Bryn Mawr Armory, 2025 E. 71st St.
 ELMHURST (DuPage County)
 York Community High School

PEORIA (Peoria County)
 Peoria State Hospital
 ROCKFORD (Winnebago County)
 Whitehead Elementary School
 SALEM (Marion County)
 Salem Civil Defense Headquarters, Bryan Park
 SPRINGFIELD (Sangamon County)
 Douglas Grade School, 444 W. Reynolds St.

MEDICAL SCHOOLS IN THE STATE OF ILLINOIS

Chicago Medical School
 710 S. Wolcott Ave.
 Chicago, Ill. 60612
 Andrew Ryan, M.D., Acting Dean
 CA 6-4100
 Northwestern University Medical School
 303 E. Chicago Ave.
 Chicago, Ill. 60611
 Richard H. Young, M.D., Dean
 649-8649

University of Chicago School of Medicine
 950 E. 59th St.
 Chicago, Ill. 60637
 Leon Jacobson, M.D., Dean
 MU 4-6100
 University of Illinois College of Medicine
 1853 W. Polk St.
 Chicago, Ill. 60612
 Granville A. Bennett, M.D., Dean
 663-7000

Stritch School of Medicine—Loyola University
 Hines, Ill.
 MU 1-5330
 921-2610
 John F. Sheehan, M.D., Dean
 706 S. Wolcott Ave.
 Chicago, Ill. 60612
 SE 3-8040

APPROVED SCHOOLS FOR MEDICAL RECORD LIBRARIANS

CHICAGO—Grant Hospital
 University of Illinois at the
 Medical Center
 DANVILLE—St. Elizabeth Hospital

APPROVED SCHOOLS OF CYTOTECHNOLOGY

CHICAGO—Michael Reese Hospital and
 Medical Center
 University of Chicago Hospitals and
 Clinics

APPROVED SCHOOLS OF NURSING

Associate Degree Programs

A program in nursing leading to an associate degree; generally established in a community or junior college. The curriculum consists of arts and sciences at the junior college level and nursing theory—closely correlated with nursing practice in community hospitals and other facilities. Graduates are prepared to give bedside nursing care to patients in hospitals, nursing homes and similar situations. They are prepared to cooperate and share responsibility for their patients' welfare with other members of the nursing and health staff, and to be self-directive in learning from their experiences as practicing nurses.

- Belleville Junior College
2600 W. Main, Belleville
- Bloom Community College
10th St. and Dixie Hwy., Chicago Heights
- Chicago City Junior College
Amundsen-Mayfair Branch, 4626 N. Knox Ave.,
Chicago 60630
- Elgin Community College
4 S. Gifford St., Elgin, 60120
- J. Sterling Morton Junior College
2423 S. Austin Ave., Cicero, 60650
- Thornton Junior College
151st and Broadway, Harvey, 60426
- Triton College
Department of Nursing, 1000 Wolf Rd., Northlake

Baccalaureate Degree Programs

A program which combines general education with nursing education, leading to the Bachelor of Science degree with a major in nursing. Its general and professional education are coordinated; literature, fine arts and other liberal education courses are shared with all college students; courses in communication skills and the biological, physical and behavioral sciences serve as the base upon which nursing courses are built. Nursing theory is closely coordinated with nursing practice, under the direction and supervision of the nursing faculty of the college or university, in a variety of hospitals and public health agencies.

Graduates of baccalaureate programs in nursing are prepared for beginning nursing positions in community health services and for advancement, without further formal education, to positions requiring beginning administrative skills such as head nursing.

Graduates also have foundations for continuing personal and professional development and for graduate study in nursing.

- Brokaw Collegiate School of Nursing
Illinois Wesleyan University, Bloomington
- DePaul University, Dept. of Nursing
25 E. Jackson Blvd., Chicago 60604
- Loyola University School of Nursing
820 N. Michigan Ave., Chicago

- North Park College
5125 N. Spaulding, Chicago 60625
- Northern Illinois University
School of Nursing, DeKalb
- St. Xavier College, School of Nursing
103rd & Central Park, Chicago
- Southern Illinois University
School of Nursing, Carbondale
- University of Illinois, College of Nursing
808 S. Wood St., Chicago

Diploma Programs

A program leading to a diploma in nursing, which is under the auspices of a hospital or which is independently incorporated. The curriculum consists of theory and practice focused on instruction and related clinical experience in the nursing care of patients in hospitals. Graduates have the understanding and skills necessary to organize and implement a plan of nursing that will meet the immediate needs of one or more patients and that will promote the restoration of health. They are also able to plan with associated health personnel for the care of patients, and may be responsible for the direction of other members of the nursing team.

- Alexian Brothers Hospital
2331 N. Lakewood Ave., Chicago
- Alton Memorial Hospital
Memorial Dr., Alton
- Augustana Hospital
411 W. Dickens Ave., Chicago
- Blessing Hospital
1005 Broadway St., Quincy
- Burnham City Hospital
311 E. Stoughton St., Champaign
- Chicago Wesley Memorial Hospital
250 E. Superior St., Chicago
- Columbus Hospital
2520 Lake View Ave., Chicago
- Cook County School of Nursing
1900 W. Polk St., Chicago
- Copley Hospital
Lincoln & Weston Ave., Aurora
- Decatur & Macon County Hospital
2300 N. Edward St., Decatur
- Dixon Public Hospital
403 E. First St., Dixon
- Evangelical Hospital
5421 S. Morgan St., Chicago
- Evanston Hospital
2650 Ridge Ave., Evanston
- Freeport Memorial Hospital
420 S. Harlem Ave., Freeport
- Galesburg Cottage Hospital
674 N. Seminary St., Galesburg
- Graham Hospital
210 W. Walnut St., Canton
- Hinsdale Sanitarium and Hospital
120 N. Oak St., Hinsdale

Illinois Masonic Hospital
 836 Wellington Ave., Chicago
 Lake View Memorial Hospital
 812 N. Logan Ave., Danville
 Little Company of Mary Hospital
 2800 W. 95th St., Evergreen Park
 Lutheran General and Deaconess Hospitals
 1700 Western, Park Ridge
 Lutheran Hospital
 555 Sixth St., Moline
 Memorial Hospital of Springfield
 First & Miller Sts., Springfield
 Mennonite Hospital
 804 N. East St., Bloomington
 Mercy Hospital
 1407 W. Park St., Urbana
 Methodist Hospital
 221 N. Glen Oak Ave., Peoria
 Michael Reese Hospital
 29th St. and Ellis Ave., Chicago
 Moline Public Hospital
 622 Fifth Ave., Moline
 Mt. Sinai Hospital
 2730 W. 15th Pl., Chicago
 Oak Park Hospital
 525 Wisconsin Ave., Oak Park
 Passavant Memorial Hospital
 303 E. Superior St., Chicago
 Passavant Memorial Hospital
 W. Walnut St., Rt. 104, Jacksonville
 Presbyterian-St. Luke's Hospital
 1753 W. Congress Pkwy., Chicago
 Ravenswood Hospital
 1931 W. Wilson Ave., Chicago
 Rockford Memorial Hospital
 2400 N. Rockton Ave., Rockford
 Roseland Community Hospital
 45 W. 111th St., Chicago
 St. Anne's Hospital
 4950 Thomas St., Chicago
 St. Anthony de Padua Hospital
 2875 W. 19th St., Chicago
 St. Anthony's Hospital
 1411 E. State St., Rockford
 St. Anthony's Hospital
 767—30th St., Rock Island
 St. Bernard's Hospital
 6344 S. Harvard Ave., Chicago
 St. Elizabeth Hospital
 1431 N. Claremont Ave., Chicago
 St. Elizabeth Hospital
 600 Sager Ave., Danville
 St. Francis Hospital
 319 Ridge Ave., Evanston
 St. Francis Hospital
 211 Greenleaf St., Peoria
 St. John's Hospital
 821 E. Mason St., Springfield
 St. Joseph's Hospital
 Fifth and Central, Alton
 St. Joseph's Hospital
 358 Broadway, Joliet

St. Mary of Nazareth Hospital
 1127 N. Oakley St., Chicago
 St. Therese Hospital
 W. Washington St., Waukegan
 Silver Cross Hospital
 600 Walnut St., Joliet
 South Chicago Community Hospital
 2320 E. 92nd Pl., Chicago
 Swedish-American Hospital
 1316 Charles St., Rockford
 Swedish Covenant Hospital
 5145 N. California Ave., Chicago
 Walther Memorial Hospital
 1116 N. Kedzie Ave., Chicago
 West Suburban Hospital
 518 N. Austin Blvd., Oak Park

Practical Nursing Programs

A program leading to a certificate or diploma in practical nursing, organized and operated under public vocational education, hospitals, or other community agencies.

This type of program, usually one year in length, is complete and satisfactory for its own purpose, preparing exclusively for practical nursing.

The curriculum is planned to include nursing theory and practice which is consistent with a short-term program. Courses include such subjects as nursing theory and practice, body structure and function, personal hygiene and community health, nutrition and home management, vocational relationships.

Graduates of programs in practical nursing are prepared for two roles: (1) under the supervision of a registered nurse or physician, they give nursing care to patients in situations relatively free of scientific complexity; (2) in a close working relationship, they assist in giving nursing care to patients in more complex situations.

Bloomington Public School of Practical Nursing
 510 E. Front St., Bloomington 61701
 Champaign Community School Unit District No. 4
 Practical Nursing Program
 Champaign 61821
 Chicago Public Schools, Practical Nurse Training
 Program, Manpower Division
 535 E. 35th St., Chicago 60612
 Danville Junior College School of Practical Nursing
 305 W. Madison St., Danville 61833
 Decatur School of Practical Nursing
 210 W. North St., Decatur
 Dixon State School of Practical Nursing
 Dixon
 East St. Louis School District 189
 240 N. 6th St., East St. Louis
 Galesburg Public School Practical Nursing Program
 650 Locust St., Galesburg 61401
 Hinsdale Sanitarium and Hospital School of
 Practical Nursing
 120 N. Oak St., Hinsdale

Jacksonville Board of Education School of
Practical Nursing
504 Court St., Jacksonville 62650
Joliet Township High School Program in Nursing
201 E. Jefferson, Joliet 60432
Kankakee School of Practical Nursing
293 E. Court St., Kankakee 60901
Mattoon School of Practical Nursing
1122 N. 22nd St., Mattoon
McAuley-Mercy School of Practical Nursing
421 N. Lake St., Aurora
Mt. Vernon School of Practical Nursing
7th and Casey, Mt. Vernon
Niles Township High School Practical
Nursing Program
Lincoln & Niles, Skokie 60076
Oak Forest School of Practical Nursing
15900 S. Cicero, Oak Forest
F. W. Olin Vocational School
2200 College Ave., Alton
Peoria School of Practical Nursing
509 W. High St., Peoria
Practical Nursing Center, Chicago Public Schools
1820 W. Grenshaw, Chicago
Proviso Township School of Practical Nursing
807 S. First Ave., Maywood
Quincy School of Practical Nursing
1200 Maine St., Quincy
Rock Island County School of Practical Nursing
2122—25th Ave., Rock Island 61201
Rockford School of Practical Nursing
201 S. Madison, Rockford
St. Francis X. Cabrini School of Practical Nursing
811 S. Lytle St., Chicago
St. Mary's Hospital School of Practical Nursing
1015 O'Connor St., LaSalle
Southeastern Illinois College
333 W. College St., Harrisburg
Southern Illinois University, Vocational
Technical Institute
Southern Acres Campus, Carbondale
Springfield School of Practical Nursing
Second and Laurel Ave., Springfield
Sterling Township High School
Practical Nursing Program
1214 Fifth Ave., Sterling 61081
Wabash Valley College School of Practical Nursing
Mt. Carmel, 62863
Waukegan Township School of Practical Nursing
Waukegan

SCHOOLS FOR TRAINING CERTIFIED LABORATORY ASSISTANTS

ALTON—Alton Memorial Hospital
CHICAGO—Swedish Covenant Hospital
ELGIN—Sherman Hospital
EVERGREEN PARK—Little Company of Mary
Hospital
OAK PARK—Oak Park Hospital
ROCKFORD—Swedish-American Hospital

APPROVED SCHOOLS OF MEDICAL TECHNOLOGY

AURORA—Copley Memorial Hospital
BLUE ISLAND—St. Francis Hospital
CHAMPAIGN—Burnham City Hospital
CHICAGO—Alexian Brothers Hospital, Augustana
Hospital, Chicago Wesley Memorial
Hospital, Edgewater Hospital, Grant
Hospital of Chicago, Holy Cross Hos-
pital, Hospital of St. Anthony de
Padua, Illinois Masonic Hospital,
Louis A. Weiss Memorial Hospital,
Michael Reese Hospital, Mount Sinai
Hospital, Northwestern University
Medical School, (Passavant Memorial
Hospital), Presbyterian-St. Luke's Hos-
pital, St. Anne's Hospital, St. Ber-
nard's Hospital, St. Joseph Hospital,
St. Mary of Nazareth Hospital, Uni-
versity of Illinois at The Medical Cen-
ter and Veterans Administration Re-
search Hospital
CHICAGO HEIGHTS—St. James Hospital
DANVILLE—Lake View Memorial Hospital
DECATUR—Decatur and Macon County Hospital
and St. Mary's Hospital
EVANSTON—Evanston Hospital and
St. Francis Hospital
EVERGREEN PARK—Little Company of Mary
Hospital
FREEPORT—Freeport Memorial Hospital
GENEVA—Community Hospital
HARVEY—Ingalls Memorial Hospital
HINSDALE—Hinsdale Sanitarium and Hospital
JOLIET—Silver Cross Hospital
MOLINE—Moline Public Hospital
OAK LAWN—Christ Community Hospital
OAK PARK—West Suburban Hospital
PEORIA—Methodist Hospital, Proctor Community
Hospital and St. Francis Hospital
QUINCY—St. Mary's Hospital
ROCKFORD—Rockford Memorial Hospital, St.
Anthony Hospital and Swedish-
American Hospital
ROCK ISLAND—St. Anthony Hospital
SPRINGFIELD—Memorial Hospital and
St. John's Hospital
URBANA—Carle Foundation
WAUKEGAN—St. Therese's Hospital

APPROVED SCHOOLS OF INHALATION THERAPY

CHICAGO—Cook County Hospital, Edgewater
Hospital, University of Chicago Hos-
pitals

APPROVED SCHOOLS OF X-RAY TECHNOLOGY

ARLINGTON HTS.—Northwest Community Hospital
AURORA—Copley Memorial Hospital
St. Charles Hospital
St. Joseph Mercy Hospital
BLUE ISLAND—St. Francis Hospital
CHAMPAIGN—Burnham City Hospital
CHICAGO—Chicago Wesley Memorial Hospital
Cook County Graduate School of Medicine
Edgewater Hospital
Englewood Hospital
Evangelical Hospital
Franklin Boulevard Community Hospital
Grant Hospital
Illinois Masonic Hospital
Louis A. Weiss Memorial Hospital
Lutheran Deaconess Hospital
Mary Thompson Hospital
Michael Reese Hospital
Mt. Sinai Hospital
Norwegian American Hospital
Presbyterian-St. Luke's Hospital
Provident Hospital
Ravenswood Hospital
Roseland Community Hospital
St. Anne's Hospital
St. Bernard's Hospital
St. Elizabeth's Hospital
St. Joseph Hospital
St. Mary of Nazareth Hospital
South Chicago Community Hospital
Woodlawn Hospital
DANVILLE—Lake View Memorial Hospital
DECATUR—Decatur and Macon County Hospital
DIXON—Dixon Public Hospital
EAST ST. LOUIS—Centreville Township Hospital
ELMHURST—Memorial Hospital of DuPage County

EVANSTON—St. Francis Hospital
EVERGREEN PARK—Little Company of Mary Hospital
HARVEY—Ingalls Memorial Hospital
HINSDALE—Hinsdale Sanitarium and Hospital
JOLIET—Silver Cross Hospital
KANKAKEE—St. Mary's Hospital
KEWANEE—Kewanee Public Hospital
MOLINE—Moline Public Hospital
OAK PARK—West Suburban Hospital
PARK RIDGE—Lutheran General Hospital
PEORIA—Methodist Hospital of Central Illinois
St. Francis Hospital
QUINCY—Blessing Hospital
St. Mary Hospital
ROCKFORD—Rockford Memorial Hospital
St. Anthony Hospital
Swedish-American Hospital
ROCK ISLAND—St. Anthony's Hospital
SKOKIE—Skokie Valley Community Hospital
SPRINGFIELD—Memorial Hospital
St. John's Hospital
URBANA—Carle Memorial Hospital
Merey Hospital

APPROVED COURSE IN OCCUPATIONAL THERAPY

CHICAGO—University of Illinois College of Medicine

APPROVED SCHOOL OF PHYSICAL THERAPY

CHICAGO—Northwestern University Medical School

ILLINOIS MEDICAL POLITICAL ACTION COMMITTEE (IMPAC)

The Illinois Medical Political Action Committee (IMPAC) is a voluntary, non-profit, unincorporated, permanent membership organization founded in 1960. IMPAC serves as the unified political action arm of Illinois physicians and their wives. It cooperates with others in the healing arts professions. Funds collected through IMPAC memberships, used in support of candidates, are administered independently of other professional groups. However, the program is operated in harmony with the legislative objectives of the Illinois State Medical Society. Individual participation in IMPAC is one means by which the individual physician and his wife can effectively participate in public affairs.

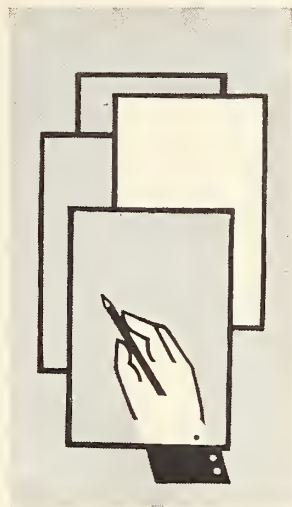
IMPAC participates primarily in election contests for legislative offices—both those in the Illinois General Assembly and in the U. S. Congress. It

cooperates, both in election efforts and in membership solicitation activities, with the American Medical Political Action Committee (AMPAC), its counterpart on the national level.

IMPAC's organization consists of a chairman, an executive committee, and a council. Political action activities are implemented by local IMPAC committees, formed in U. S. Congressional or other legislative districts. Candidate selection and support are determined on the basis of evaluations and recommendations submitted to the council and executive committee by the local committees, thus assuring members of a "grass roots" voice in IMPAC activities.

Additional information about IMPAC may be obtained by writing: IMPAC, 360 N. Michigan Ave., Chicago 60601.

MEDICAL-LEGAL INFORMATION



Legal Services of ISMS

The Illinois State Medical Society retains a general counsel and occasionally uses the services of special counsel in implementing its various programs. Legal advice is given to the state society and its components as organizations, but is not available to individual members.

The legal department of the Society can answer specific questions propounded by officers of county medical societies in Illinois, which are part of and make up the state society, if the questions are of interest to the membership as a whole.

Although the Society and its counsel cannot provide personal advice to ISMS members, it is to every physician's advantage to acquaint himself with as much general medical-legal knowledge as possible. The following section, therefore, is devoted to this kind of information.

HOW TO SET YOUR AFFAIRS IN ORDER

A physician's death, expected or not, often creates burdensome tasks for survivors. Natural grief is complicated by the necessity for rapid decisions and hurried searches for required information. Significant papers may be so well put away that prolonged seeking in various places may be required, with added pain for the bereaved.

It is therefore suggested that the physician, during his lifetime, ease the situation by compiling in one place needed information about the location of important records and papers. In addition, the Illinois State Medical Society urges each member to have a will prepared by a competent attorney and to have the said will re-evaluated by an attorney whenever there is any material change in any conditions.

The executor named in the will can handle the doctor's estate most efficiently if he has access to specific information.

The physician should, of course, leave information about insurance, real estate, and bank accounts just as everyone else does, but he has additional responsibilities peculiar to his profession. He should leave instructions for:

1. Temporary coverage of his practice. Some arrangement with a colleague should be made immediately for hospitalized patients and others should be notified of the doctor's death.

2. Patient records, which should be carefully preserved for a minimum of 10 years and for 25 years, if possible. Contents of the records should be turned over to another physician upon written request.

3. Return of unused narcotics to the Treasury Department, the narcotics tax stamp and order book to the Internal Revenue Service, and retention of the narcotics ledger for two years.

4. Disposal of his practice. If it is to be sold, rapid action is advised as value is lost quickly. Equipment is best disposed of with the sale of the practice.

5. Benefits that may be due survivors from unused insurance premiums, Blue Cross-Blue Shield, Veterans Administration, or Social Security.

As soon as practical after death, the attorney who will handle the estate should be contacted and his advice followed thereafter.

LEGAL LIABILITY OF PHYSICIANS

The legal liability of physicians is a question on which much has been written. It has also been the topic of discussion at many meetings of medical and medical-legal groups. However, because of the grave nature of the problem, the Illinois State Medical Society's legal counsel believes that the subject cannot be overemphasized.

Statistics prove that the number of malpractice and general liability suits against physicians is on the increase. This does not mean that physicians are becoming less skillful or more careless in their diagnosis and treatment; it probably means that

physicians are being affected by the tremendous growth there has been recently in all types of personal injury litigation.

More people than ever before are receiving medical attention and more are starting lawsuits against physicians when recovery is less than complete.

Liability Insurance

For this reason, it is essential that every physician carry liability insurance to protect him against all possible claims. The physician should be aware, however, that there are some inadequate policies on the market today and an attorney should be consulted before contracting for insurance that may not cover the doctor's particular circumstance. Additional coverage insofar as limits are concerned is relatively inexpensive and should be carried in sufficient amount to cover all possibilities.

A physician today is a "sitting duck" for a lawsuit even though he may in no way be guilty of negligence. And lawsuits to defend, no matter how meritorious, require the expenditure of time and money.

Legal implications in this field are wide, but basically the physician is liable for his own negligent acts and the negligent acts of all his employees. In the case of a partnership, he is also liable for the negligent acts of his partners.

While the right kind of insurance in sufficient amount will protect the physician financially, steps should be taken by all doctors to help minimize the filing of lawsuits of this kind and to work for reduction in the number of guilty verdicts being obtained.

The American Medical Association has prepared, and has available for distribution, several interesting pamphlets and papers on this subject. The pamphlet entitled, "Professional Liability and the Physician," reprinted from the February 1963 issue of the Journal of the American Medical Association, contains this statement:

Physician's Responsibility

"In the final analysis, the physician himself must share the responsibility for the continuing existence of the unpleasant professional liability situation. Many physicians have been satisfied to pay their professional liability insurance premiums and thereafter to sit back complacently, doing nothing until they become a target. Every physician must be brought to realize that this money payment is only part of his insurance program; a much more important part is his contribution of time, study, and attention to put into effect all possible measures to safeguard the patient, himself, and his colleagues. Professional liability is in no sense merely an insurance problem—it is a medical problem and must be combated by members of the medical profession."

The AMA pamphlet goes on to say that "prevention is the best possible defense against claims and suits" and lists these 21 prevention "commandments":

1. The physician must care for every patient with

scrupulous attention given to the requirements of good medical practice.

2. The physician must know and exercise his legal duty to the patient.

3. The physician must avoid destructive and unethical criticism of the work of other physicians.

4. The physician must keep records which clearly show what was done and when it was done, which clearly indicate that nothing was neglected, and which demonstrate that the care given met fully the standards demanded by the law. If any patient discontinues treatment before he should, or fails to follow instructions, the records should show it; a good method is to preserve a carbon copy of the physician's letter advising the patient against the unwise course.

5. The physician must avoid making any statement which constitutes, or might be construed as constituting an admission of fault on his part. He should instruct employees to make no such statements.

6. The physician must exercise tact as well as professional ability in handling his patients, and should insist on a professional consultation if the patient is not doing well, if the patient is unhappy and complaining, or if the family's attitude indicates dissatisfaction.

7. The physician must refrain from over-optimistic prognoses.

8. The physician must advise his patients of any intended absences from practice and recommend, or make available, a qualified substitute. The patient must not be abandoned.

9. The physician must unfailingly secure an "informed" consent (preferably in writing) for medical and surgical procedures and for autopsy.

10. The physician must carefully select and supervise assistants and employees and take great care in delegating duties to them.

12. The physician should limit his practice to those fields which are well within his qualifications.

13. The physician must frequently check the condition of his equipment and make use of every available safety installation.

14. The physician should make every effort to reach an understanding with his patient in the matter of fees, preferably in advance of treatment.

15. The physician must realize that it is dangerous to diagnose or prescribe by telephone.

16. The physician should not sterilize a patient solely for the patient's convenience except after a reasonably complete explanation of the procedure and its risks and possible complications and after obtaining a signed consent from the patient and from the patient's spouse if the patient is married. Such sterilization is a crime in Connecticut, Kansas, and Utah and should not be performed in those states. Eugenic sterilization should be performed only in conformity with the law of the state, if any. Sterilization for therapeutic purposes may lawfully be performed with the informed consent of the patient and preferably with the informed

consent of the patient's spouse, if the patient is married.

17. Except in an actual emergency situation which makes it impossible to avoid doing so, a male physician should not examine a female patient unless an assistant or nurse, or a member of the patient's family is present.

18. The physician should exhaust all reasonable methods of securing diagnosis before embarking upon a therapeutic course.

19. The physician should use conservative and less dangerous methods of diagnosis and treatment wherever possible, in preference to highly toxic agents or dangerous surgical procedures.

20. The physician should read the manufacturer's brochure accompanying a toxic agent to be used for diagnostic or therapeutic purposes, and, in addition, should ascertain the customary dosage or usage in his area.

21. The physician should be aware of all the known toxic reactions to any drug he uses, together with the proper methods for treating such reactions.

Physician and Hospital Liens

Paragraph 101.1 of Chapter 97, Illinois Revised Statutes 1965, provides that every licensed physician practicing in the State of Illinois who renders service to an injured person, except services rendered under the provisions of the Workmen's Compensation Act, shall have a lien upon all claims and causes of action for the amount of his reasonable charges up to one-third of the sum recovered by the injured person. In order to effectuate this lien, notice in writing must be given to the injured person and also to the person or persons against whom such claim or right of action exists.

Under paragraph 97 of Chapter 82, Illinois Revised Statutes 1965, not-for-profit hospitals and those hospitals maintained by a county shall have a lien on all claims or causes of action for the amount of reasonable charges at ward rates up to one-third of the amount recovered. Again, in order to perfect the lien, it must be filed in the same manner as the physician's lien described above.

While the language is substantially the same under both liens, they are entirely separate enactments, neither is subservient to the other and, therefore, both the hospitals and the physicians can recover up to one-third of the amount received by the patient.

Admissibility in Evidence of Deliberations of Tissue Committees

In 1963 the Illinois legislature passed an act in which one of the purposes was to prevent the admissibility in evidence and making public the deliberations and findings of tissue committees. The act is set out at paragraphs 101-105 of Chapter 51, Illinois Revised Statutes 1965, and is as follows:

"101. All information, interviews, reports, statements, memoranda or other data of the Illinois Department of Public Health, Illinois State Medical Society, allied medical societies, or in-hospital staff

committees of accredited hospitals, but not the original medical records pertaining to the patient, used in the course of medical study of the purpose of reducing morbidity or mortality shall be strictly confidential and shall be used only for medical research.

102. Such information, records, reports, statements, notes, memoranda, or other data, shall not be admissible as evidence in any action of any kind in any court or before any tribunal, board, agency or person.

103. The furnishing of such information in the course of a research project to the Illinois Department of Public Health, Illinois State Medical Society, allied medical societies, or to in-hospital staff committees or their authorized representatives, shall not subject any person, hospital, sanitarium, nursing or rest home or any such agency to any action for damages or other relief.

104. No patient, patient's relatives, or patient's friends named in any medical study, shall be interviewed for the purpose of such study, unless consent of the attending physician and surgeon is first obtained.

105. The disclosure of any information, records, reports, statements, notes, memoranda or other data obtained in any such medical study except that necessary for the purpose of the specific study is unlawful, and any person convicted of violating any of the provisions of this Act is guilty of a misdemeanor."

While there have been no decisions under the act quoted by any of the Illinois appellate courts or the Supreme Court, it would appear that a tissue committee would come within the meaning of "in-hospital staff committees of accredited hospitals," and, therefore, would be inadmissible in evidence and considered private and confidential. Unfortunately, the act does not define accredited hospitals, but this would probably mean either licensed hospitals or those accredited by the medical professions. (There are only 10 licensed hospitals in Illinois which have not been accredited by the medical professions.)

In addition to the above statute, the fact that tissue committees are not required by Illinois law, but are established through the voluntary co-operation of the hospitals and the medical profession for the betterment of medicine through research of prior cases, would be a powerful argument against admissibility.

Another legal argument against the introduction in evidence of such records would be the fact that the results would be the deliberations of a committee and there would be no way to cross-examine a committee, which would mean that a fundamental right was being lost by one or more of the litigants in the case.

As stated above, there are no decisions in Illinois which can be relied upon, but it is the opinion of the ISMS general counsel that such records cannot legally be used in any legal action.

It should be pointed out that in most instances subpoenas and subpoenas duces tecum (produce the records) are issued by the clerk of the court on application of one of the parties litigants and no determination is made as to the admissibility of the testimony or records until the witnesses and records are produced in court. It is suggested that if a subpoena or court order is ever received involving the records and deliberations of the tissue committee, your attorney be immediately contacted in order to file appropriate motions to suppress the production of the records. If the trial court should hold that such records are admissible, it is then suggested that an appeal be made to the Supreme Court of Illinois on this question, for if such records are produced, it could conceivably have the result of diminishing the efficiency or the ultimate abandonment of such committees, with the result that research and advancement in the art of medicine would be retarded.

Consent by Minors to Medical Treatment and Operations

The general law in Illinois is that a minor cannot give legal consent or waive any rights which he has under the law. In the year 1961, the Illinois legislature made an exception to this rule by specifically providing that consent to the performance of medical or surgical treatment by a licensed physician could be executed by a married person who is a minor or a pregnant woman who is a minor and shall not be voidable because of such minority. This act further provides that any parent who is a minor may consent to the performance upon his or her child of medical or surgical procedures by a licensed physician and that the consent shall not be voidable because of such minority.

The act referred to above is set out at paragraphs 18.1 and 18.2 of Chapter 91, Illinois Revised Statutes 1963.

Employment Contract Between Physician and Patient

The relationship between a physician and a patient is one of contractual relationship and, therefore, a physician is under no legal requirement to accept anyone as a patient unless he so desires. This rule is true in the case of an emergency even though no other physician is available.

Legally, a physician has the right to refuse treatment in the case of an accident or other emergency and could not in any way be held liable for refusing to administer aid. (This is strictly the legal answer and does not involve the moral or ethical question.) The rendering of such services as may be necessary in the case of an emergency does not of itself give rise to the relationship of physician and patient and the physician is under no obligation to continue treatment beyond the emergency.

The physician in rendering emergency treatment, however, must use the same degree of skill and care, as required in other cases, taking into consideration conditions at the scene of the accident.

Continuation of Treatment

A physician or surgeon, on undertaking an operation or treatment, is under the duty, in the absence of an agreement limiting the service, of continuing his attendance, after the operation or first treatments, as long as the case requires attention; and a surgeon, in his treatment subsequent to an operation, is required to exercise reasonable and ordinary skill and care.

The failure to give needed continued care under an obligation to do so constitutes negligence or malpractice. The obligation of continuing attention can be terminated only by the cessation of the necessity which gave rise to the relationship of physician and patient, by mutual consent of the parties, by the discharge of the physician by the patient, or by the physician's withdrawing from the case after giving the patient reasonable notice so as to enable him to secure other medical attendance.

A physician has the legal right to withdraw from a case if the patient breaks the contract by failure to follow the medical advice or treatment and direction of the physician, but the relationship cannot be terminated until the physician has advised the patient of his withdrawal from the case and has allowed the patient a reasonable length of time to procure another doctor.

Written Notice

What is reasonable notice to the patient depends upon the circumstances of each case. Factors which must be taken into consideration are the condition of the patient, the size of the community, and the availability of other physicians. In order to be completely safe, prior to withdrawal from the case, the physician should advise the patient in writing of his intent to withdraw, his reasons therefor, and the fact that he will make available the patient's case history and information regarding diagnosis and treatment to the new physician when selected by the patient. Should the patient return to the original physician stating that he has been unable to procure other medical aid, treatment should not be refused until a replacement has been obtained.

A physician has the right to leave his practice temporarily if he makes provisions for the attendance of a competent physician during his absence. This notice, which again preferably should be in writing, should be in sufficient time so that the patients can obtain replacements of their own choice if they do not desire to consult the physician temporarily handling the practice of the absent physician.

GOOD SAMARITAN BILL

The 1965 Legislature passed and the Governor signed Senate Bill 395, the so-called "Good Samaritan Bill." This bill provides that any physician who, in good faith, provides emergency care without a fee at the scene of a motor vehicle accident or in case of nuclear attack shall not as a result of his acts or omissions, except in the case of

gross willful or wanton negligence, be liable for damages.

The physician in rendering emergency treatment other than that necessitated by motor vehicle accidents or nuclear explosions must use the same degree of skill and care as required in other cases, taking into consideration conditions at the scene of the accident.

CONSUMER FRAUD ACT

This act is designed to protect the consumer. In part it reads,—“The act, use or employment by any person of any deception, fraud, false pretense, false promise, misrepresentation, or the concealment, suppression, or omission of any material fact with intent that others rely upon such concealment, suppression or omission, in connection with the sale or advertisement of any merchandise, whether or not any person has in fact been misled, deceived or damaged thereby, is declared to be an unlawful practice.” The term merchandise includes any objects, wares, goods, commodities, intangibles, real estate, or services.

COMMITMENT OF PATIENTS TO MENTAL HOSPITALS

The State of Illinois has adopted in the past two years a Mental Health Act which went into effect July 1, 1964, which Act is set out under Chapter 91½, Articles III through IX, Illinois Revised Statutes 1965.

Under the provisions of this Act and the Youth Commission Act, there are seven ways in which an individual may be admitted to a mental hospital.

1. Informal admission
2. Voluntary application for admission
3. Admission on certificate of one physician
4. Admission on certificate of two physicians
5. Hospitalization upon court order
6. Emergency admission, except for mentally retarded persons
7. Special procedures by the Youth Commission

Informal admission:

Any person, as to admission for mental illness to a state hospital, may be admitted without formal application if the superintendent, after examination, deems the person suitable. Such patient is to be released on his request at any time between the hours of 9 a.m. and 5 p.m. and he is to be advised of such right when he is admitted. This section does not apply to the person who is a patient of a physician and is admitted to a licensed private hospital or the psychiatric unit of a general hospital under the supervision of such physician.

Voluntary application for admission:

Any person who is mentally retarded or in need of mental treatment or is alleged to be in need of mental treatment or being mentally retarded may be admitted to a hospital if, in the judgment of the superintendent, such person is a proper subject for voluntary admission after application has been filed, with the application being presented by the person

himself or his attorney or relative with his consent or if a minor, by his parent or guardian. Upon this type of admission, the patient has the right to leave the hospital 15 days after having given notice in writing of his desire to leave and upon admission the patient shall be advised both orally and in writing of this right of release. The advice so given is given to the patient and his relatives, parents, guardian or attorney if any such accompany the patient to the hospital. However, this release in 15 days may not take place in such period if a petition for hospitalization upon court order is filed within such 15 days period.

The patient also may be discharged by act of the superintendent.

While the voluntary patient and those admitted on certificate of one physician or upon certificate of two physicians may be restrained and given such standard treatment as fits the patient's welfare, no surgery may be performed except by consent of the patient or the parent or guardian.

Admission on certificate of one physician:

The superintendent of a mental hospital may receive and detain as a patient any person alleged to be in need of mental treatment who does not object thereto upon the application signed by a proper relative of the patient or peace or health officer or an officer of any proper charitable or proper welfare institution or by the superintendent of a hospital operated by the state or a political subdivision thereof, or by a friend of the patient together with the certificate of one examining physician executed within 10 days prior to such admission. Prior to admission the superintendent of the mental hospital shall cause the patient to be again examined in order to confirm the need for hospitalization. If the hospital determines within 15 days after admission that the patient should be detained for further care and treatment and the patient does not agree to remain in the hospital as a voluntary patient, the certificate of another examining physician supporting the application is required.

Admission on certificate of two physicians:

The same general procedure is followed here as in the case of one physician, except that the consent of the patient is not required, but within five days after his admission he shall consult at the hospital with a magistrate or other judicial officer, at which time he shall be advised of his right to hearing, at which hearing he must be represented by counsel and may present evidence. After admission the patient is forthwith to be examined by some other physician than said two physicians and must be found to be in need of treatment. The patient also has a right to further hearing any time prior to expiration of 60 days from his admission. If this is not asked, the superintendent must arrange in said period to have a hearing. Other provisions also provide for further periodical review of need for hospitalization.

Hospitalization upon court order:

Whenever any person shall be, or supposed to be, mentally retarded or in need of mental treatment, any reputable citizen of this state may file in the Circuit Court the verified petition alleging that the individual is in need of mental treatment and that he be admitted to, and confined to, a hospital for the mentally ill. Upon the filing of the petition the court shall have power to make necessary temporary orders of restraint and a hearing shall be had after an examination has been made by a physician or psychologist appointed by the court. At the hearing the patient may be represented by counsel and has the right to a trial by a jury of six. When the patient demands a jury, one of the six members shall be a physician or a psychologist dependent upon question of mental treatment or mental retardation.

Emergency admission, detention:

Whenever a petition is filed in the Circuit Court by a reputable citizen alleging that the condition of an individual is such that immediate restraint is necessary, which petition is accompanied by a certificate of a physician, the individual may be confined in a mental hospital for a period not exceeding 15 days.

This new Mental Health Act not only appears to contain adequate provisions for the confinement of mental cases, but also provides sufficient safeguards so that an individual cannot be wrongfully restrained for an undue period of time. In fact, it would seem remote that abuses would happen under the numerous safeguards provided. As an example, any advice as to the rights of the patient must be given in a language with which the patient is familiar.

The State's Attorney of each county is charged with the responsibility of the enforcement and operation of this Act and this is the office which should be contacted by the physician when dealing with mental patients. The clerks of the courts concerned have been furnished forms to be employed under the Act and it is provided that all forms shall comply substantially with those so furnished so that it is obvious that one should employ the same.

INTERNAL REVENUE CODE

It should be evident to the busy physician that it is just as unwise for him to be his own tax consultant as it is for every man to be his own doctor. The physician is well aware that in seeking to keep abreast of all of the ramifications and developments of modern medicine, he has a burden that is becoming increasingly difficult to sustain and that he has very little time to devote to subjects as complex as taxation, which is rightfully the province of his accountant and lawyer.

Taxation in the United States is complex and many tax matters have no particular application to the medical profession as such. However, the doctor as a citizen should be aware that he is greatly affected by a subject so varied and so complicated that the statutes themselves require some 1,500

pages to be set forth. And he should know that sections 1(a) through 8023(b) are printed in a size of type that should be of some benefit in fees to practitioners who concern themselves with the human eye. Surely the point that physicians are well advised to place their problems with accounting and legal advisors is further exemplified by such facts as the following:

Regulations implementing the Internal Revenue Act require some 9,700 pages for them to be spelled out and that, in order to designate the different regulations, the government needs to entitle the regulations as Regulation Section 1.0-1 through Regulation Section 301.770-11.

Just as the patient would be so much better served if he saw his doctor regularly before difficulties become advanced, so the physician's interests would be better served if he would seek advice on income and estate tax problems before the fact, rather than after problems have arisen.

PROCEDURES AND REPORTS IN CONTROL OF NARCOTIC DRUGS

Physicians are subject to control by both the state of Illinois and the federal government in relation to narcotic drugs. The numerous provisions of the federal regulations are set forth in a fairly lengthy pamphlet entitled, "Regulations No. 5 Relating to the Importation, Manufacture, Production, Sale, etc., of Opium, Coca Leaves, Isonipicaine or Opiates," which was reprinted April 1, 1957, and is available at a cost of 45 cents through the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. This is published by the Bureau of Narcotics of the U. S. Treasury Department.

The state of Illinois' "Uniform Narcotic Drug Act" has been in effect since Jan. 1, 1958. It is found in paragraphs 22-1 through 22-49, inclusive, Chapter 38 of Illinois Revised Statutes, 1965. The Division of Narcotic Control's current rules and regulations to implement the Act have been in effect since Apr. 1, 1960. They cover such matters as prescriptions and official forms therefor, emergencies excusing use of other than official prescription forms, reporting of loss or theft of such prescription blanks, records to be kept by the physician, dispensing of hypodermic syringes and needles, prescribing procedures in hospitals, and other subjects related to narcotic drugs. The Act and the rules and regulations are available at no cost through the Division of Narcotic Control, 623 E. Adams St., Springfield.

Further, the state of Illinois has had in effect since Jan. 1, 1960, a "Uniform Drug, Device and Cosmetic Act." Its rules and regulations control such things as the keeping of adequate records, for a period of two years, of all purchases and dispositions of dangerous drugs as such drugs are defined by the Act. A publication containing the Act and the pursuant rules and regulations is also available through the Division of Narcotic Control in Springfield.

All physicians are urged to have in their possession copies of both the state and federal narcotics control acts and the rules and regulations implementing them. As these laws and regulations are changed from time to time, every effort should be made to have the current rules handy.

PROCEDURES AND REPORTS AS TO COMMUNICABLE DISEASES

In order to be conversant with the presently governing rules and regulations as to the control of communicable diseases and the physician's duties as to reports and procedures in relation to these afflictions, it is suggested that the physician apply to the Department of Public Health of the State of Illinois at Room 500, State Office Building, Springfield, for the publication entitled, "Rules and Regulations for the Control of Communicable Diseases," which was revised July 1, 1959.

HOW TO WILL YOUR BODY OR ANY PORTION THEREOF TO SCIENCE

The law in the State of Illinois as to the right of an individual to leave his body or particular parts thereof to science by will or agreement is not at all clear. While there are instances of medical science receiving dead bodies or parts thereof under provisions in wills and agreements made prior to death, such disposition has never been passed upon by the Illinois courts of last resort. There is no statutory authority in Illinois specifically providing for such disposition and it was planned, upon the advice of the ISMS counsel, to introduce a bill in the 1965 session of the legislature to specifically authorize this procedure. This suggestion was deferred due to the fact that the subject matter would have been controversial and it was felt that with the many built-in disagreements and differences of opinion in this session, it might be better policy to hold up until the 1967 session.

Illinois does have an Act covering deceased bodies which are to be buried at public expense. These bodies may, under certain conditions, be used for advancement of medical science. The Act is set forth in paragraph 19, Chapter 91, Illinois Revised Statutes 1965, and is as follows:

"Superintendents of penitentiaries, houses of correction and bridewells, hospitals, state charitable institutions and county homes, coroners, sheriffs, jailors, funeral directors and all other state, county, town and city officers, in whose custody the body of any deceased person, required to be buried at public expense, shall, in the absence of disposition of such body, or any part thereof by will or other written instrument, give permission to any physician or surgeon licensed in Illinois, or to any medical college or school, or other institution of higher science, education or school of mortuary science, public or private, of any city, town or county, upon his or their receipt in writing or request therefor, to receive and remove free of public charge or expense, after having given proper notice to relatives or guardians of the deceased, the bodies of such deceased persons

about to be buried at public expense, to be by him or them used within the state, for advancement of medical, anatomical, biological or mortuary science. Preference shall be given to medical colleges or schools, public or private and such bodies to be distributed to and among the same, equitably, the number assigned to each, being in proportion to the students of each college or school: except, if any person claiming to be, and satisfying the proper authorities that he is of kindred of the deceased asks to have the body for burial, it shall, in the absence of other disposition of such body, or any part thereof by will, court order, or other written instrument, be surrendered for interment. Any medical college or school, or other institution of higher science education or school of mortuary science, public and private, or any officers of the same, that receive the bodies of deceased persons for the purposes of scientific study, under the provisions of this Act, shall furnish the same to students of medicine, surgery, and biological or mortuary sciences, who are under their instruction, at a price not exceeding the sum of \$5.00 for each and every such deceased body so furnished."

It should be noted that in the above law it is provided that disposition shall be made only in case the deceased has not specifically made disposition by his will or other written instrument. This would tend to support an argument that the deceased does have the right to dispose of his body as he sees fit, but to make it completely clear a new act specifically giving this power should, if possible, be adopted by the legislature.

The rather recent discovery that certain parts may be removed from a dead body and used in a living person has greatly increased the need for cadavers and parts thereof. Any one wishing to make a donation should so provide by his will and notify the institution to receive the body, or any part thereof, of this provision in his will and also notify the executor of the will and his next of kin, or whoever is the most likely to be notified immediately of his death, for time is of the essence in the case of transplants.

AUTOPSY

In Illinois, the heirs and next of kin can bring an action for mutilation of the body in those cases where an autopsy is performed without authority or permission. In order to avoid the possibility of liability, autopsies should only be performed, in Illinois, when ordered by the coroner or upon written consent given by the next of kin.

THE MEDICAL WITNESS

It is difficult to find a field of law in which expert evidence is of greater importance than the testimony of the physician in accident cases. The carnage and mutilation on highways alone result in many thousands of lawsuits a year and the busy physician finds that attending court is a burden that often cannot be avoided.

There may be hope that the growing use of depositions will reduce some of the load from both physicians and attorneys as disclosure of evidence through deposition is likely to result in settlement before a case is brought to trial. Nevertheless, all signs indicate that the average practitioner can expect an increase in the number of times he will be called upon as an expert witness in the coming years.

It is suggested that, if the physician wishes to better prepare himself as to medical jurisprudence, there are a number of sources which can give him an insight into what he may expect in the forum and give him greater confidence as to this aspect of his practice. Such sources, without even the suggestion that the following begin to exhaust a listing, are:

1. Doctor and Patient and the Law, by Attorney C. Joseph Stetler and Alan R. Moritz, M.D., Director of the Institute of Pathology at Western Reserve University, Fourth Edition, published in 1962 by The C. V. Mosby Company of St. Louis.

2. Chapter III on Evidence in Law in Medical and Dental Practice by Lott and Gray, published in 1942 by The Foundation Press of Chicago.

3. Medical Trial Technique by Attorney Irving Goldstein and Willard Shabat, M.D., published in 1942 by Callaghan and Company of Chicago.

4. Lawyers Medical Cyclopedia of Personal Injuries and Allied Specialties, which consists of seven volumes and is an elaborate treatment of the subject; published in 1962 by The Allen Smith Company of Indianapolis.

5. The Rights and Rewards of the Medical Witness by Nordstrom, published in 1962 by Thomas Publishing Company of Springfield.

INTERPROFESSIONAL CODE FOR PHYSICIANS AND LAWYERS OF ILLINOIS

The following Interprofessional Code for Physicians and Lawyers of Illinois was drafted by a Special Committee on Medical-Legal Cooperation of the Illinois State Bar Association and the Liaison Committee of the Illinois State Medical Society to serve as a guide to physicians and lawyers. It has been approved by the governing boards of both the Illinois State Bar Association and the Illinois State Medical Society.

Preamble

The purposes of this Code are to establish standards of practice and of ethical conduct for physicians and lawyers in those areas in civil cases where there is and will continue to be an interrelationship of medicine and law, and thereby to improve the practical working relationships of the two professions, to protect the legitimate interests and the rights of the patient-client, of the physician, the lawyer, and of society, and thereby to help advance the more effective administration of justice.

The provisions of the Code constitute recognition that the members of each profession have an obligation not only to the individual who obtains their

advice and assistance but also to the community and society as a whole, and to all other members of their own professions. The objectives of the Code can be achieved only if the members of both professions acquaint themselves with these standards of practice and follow them, subject to rules of law and principles of medical and legal ethics.

ARTICLE I

ATTENDING PHYSICIAN'S MEDICAL REPORTS AND CONFERENCES

Purpose of Physician's Report

1. Information relative to an attending physician's treatment of a patient whose physical or mental condition is an issue in litigation is of prime importance to the parties involved in litigation. To properly prepare his client's case for trial and to be in a position to properly represent his client in settlement negotiations, the patient's lawyer has the duty of acquiring pertinent information from the attending physician. During the course of litigation, it becomes necessary for the lawyer to correspond with and confer with his client's physician and to obtain written reports from the physician.

Keep Complete Records

2. The attending physician should prepare, keep and preserve full and complete records of his examination, diagnostic findings (laboratory), and treatment of the patient.

Request for Report

3. When a medical report is desired by the lawyer, he should make a written request for it from the attending physician, and this request should be accompanied by a written authorization from the client for the release of the information sought from the client's physician. The request should ask the physician to give the following specific information:

- (a) History of the occurrence leading to the injury or condition, as given by the patient to the physician.
- (b) Pertinent subjective complaints elicited from the patient.
- (c) Pertinent objective findings made by the physician throughout the course of treatment.
- (d) The physician's diagnosis.
- (e) Interpretation of x-rays, electroencephalograms, electromyograms, and any and all other pertinent data used in the treatment and diagnosis (source and interpretation should be stated).
- (f) Treatment rendered by the physician to the patient.
- (g) The physician's opinion as to whether there is permanent residual from the injury or condition and the extent thereof.
- (h) The prognosis.
- (i) The physician's opinion as to the necessity of further medical or surgical treatment.

The request for a report should be accompanied by a statement that the lawyer will endeavor to

provide for the payment of the physician's fees out of any settlement or satisfaction of judgment.

The Physician's Report

4. The physician has the obligation to cooperate with his patient's lawyer and should as soon as practicable after receiving the request for it supply the patient's lawyer with a written report. This report should be clear and concise and should contain specific responses to the elements enumerated in the lawyer's request for a report. In preparing the report, the physician should examine his own records and where practicable, the records of any hospital he deems necessary pertaining to the treatment of the patient.

The attending physician should not give written or oral reports concerning his patient to attorneys, adjusters, or investigators representing parties whose interests are adverse to those of the patient without express written authorization from the patient.

Report Should Be Complete

5. The report to the lawyer should be objective impartial and complete. The attending physician should not give, and should not be asked to give a report that does not comply with these standards.

Conference Between Physician and Lawyer

6. Prior to the submission of a medical report by the attending physician to the patient's lawyer, conferences may be required between the patient's physician and lawyer. Conferences at the request of either the physician or the lawyer should be arranged at the mutual convenience of each. At the conference there should be candid discussion of the medical aspects of the litigation to promote complete understanding between the patient's physician and lawyer.

ARTICLE II

EXAMINING PHYSICIAN'S MEDICAL REPORTS

The "examining physician," as the term is used in the Code, differs from the "attending physician" and the "expert" in that he does not prescribe treatment and is not necessarily expected to testify at the trial. His examination is made at the request of the lawyer for one or both of the parties or at the request of the court. Should he later testify at the trial he testifies as an expert.

Request for Examination and Report

1. Where the examination is made at the behest of either party, a written request for examination should be sent to the physician by the lawyer asking for the examination stating the nature of the examination desired.

The request should be specific and request the physician to give the following information:

- (a) Pertinent subjective complaints elicited from the patient.
- (b) Pertinent objective findings made by the physician.

- (c) The physician's diagnosis as of the time of the examination.
- (d) Interpretation of x-rays, electroencephalograms, electromyograms and any and all other pertinent data used in the diagnosis (source of interpretation should be stated).
- (e) The physician's opinion as to whether there is a permanent residual from the injury, and the extent thereof.
- (f) The prognosis.
- (g) The physician's opinion as to the necessity of further medical or surgical treatment.

Report of Examination

2. The examining physician should send the report of the examination to the lawyer requesting the examination as soon as practicable after the examination. The report should be clear and concise and should contain specific responses to the elements enumerated in the lawyer's request.

Report is Confidential

3. The examining physician shall not give medical information to the opposing lawyer without the authorization of the lawyer who requested the examination, unless the examination is pursuant to order of court.

Keep Complete Records

4. The examining physician should prepare, keep and preserve full and complete records of his examination and diagnostic findings (laboratory).

Report Should Be Complete

5. The report to the lawyer should be objective, impartial, and complete. The examining physician should not give, and should not be asked to give a report that does not comply with these standards.

Examination at the Request of the Court

6. Provisions for examination at the request of the court, and the procedure to be followed, are covered by rule of court or by statute.

Copy of Report to Employee in Workmen's Compensation Cases

7. In Workmen's Compensation cases, the examining physician selected by the employer is required to deliver a copy of his report to the injured employee or his lawyer, unless the employee has a physician of his own selection present during the examination.

ARTICLE III MEDICAL FEES

Attending Physician

(1) The attending physician of a patient whose physical or mental condition is the subject matter in litigation may, in the manner provided by the Statutes of the State of Illinois, perfect his lien for medical fees for his services rendered to the patient. (See Appendix for suggested form of lien notice.)

(2) The physician should also notify the lawyer

for the patient of his lien by sending him a copy of the Notice of Lien.

(3) The lawyer for the patient should explain to his client the nature of the lien and necessity for satisfying it out of any recovery. The lawyer should take all reasonable steps to assure payment for the physician's services out of any recovery made for the client. If the lawyer finds that he cannot accomplish this, he should notify the physician immediately so that he may take steps to enforce his lien. (See Appendix for suggested form of authorization to be used by lawyer.)

(4) In the event that the attending physician expends time in preparing a report, in appearing at a deposition or in court, or in any other manner for his patient, the physician shall be entitled to a reasonable fee from his patient. The lawyer shall take all reasonable steps to see that his client pays the said fee.

(5) The attending physician shall not charge his patient a higher fee because the patient may recover the amount of these charges as the result of a claim or litigation.

(6) The lawyer should not pay the attending physician's fee except with the client's funds.

(7) The physician's fee shall not be contingent upon the outcome of the litigation.

Examining Physician

(1) A physician who makes an examination at the request of a lawyer shall charge the reasonable value of his services so rendered on the same basis as if his services were not rendered to a patient in connection with litigation. The physician's charge for reports, conferences with the lawyer, and appearances at depositions and in court shall also be based upon the reasonable value of those services.

(2) The said charges shall be the obligation of the client and not of his lawyer. The lawyer shall make every reasonable effort to see to it that his client pays the fee of the examining physician for all services rendered by the physician to or in behalf of said patient.

(3) The examining physician's fee shall not be contingent upon the outcome of the litigation.

Experts

(1) The physician whose services may be rendered as an expert in connection with any phase of litigation, shall not charge more than the reasonable value of his services. The fee shall be the obligation of the patient-client and not of his lawyer.

(2) The lawyer shall make every reasonable effort to see that his client pays the fee of the expert.

(3) The expert's fee shall not be contingent upon the outcome of the litigation.

ARTICLE IV

THE PHYSICIAN AT THE TRIAL OR HEARING ON DEPOSITION

Conferences Prior to Trial

(1) The lawyer and the physician should arrange to confer with each other before the physician testi-

fies at any hearing, and if possible, before the trial commences. At the conference the common problems involved in the case should be discussed. The lawyer has the responsibility of acquainting the physician with any particular legal problems which might involve the physician, and with the assistance of the physician should determine the areas in which the physician will be called to testify. The lawyer should familiarize the physician with the contents of any proposed hypothetical questions.

(2) The physician should make every effort to cooperate with the lawyer in regard to this conference. Each should be mindful of the demands on the other's time in making appointments for conferences, in the time spent on conferences, and in notifying the other promptly if, for any reason, either is unable to attend the appointed conference. While the physician should recognize that he is not an advocate and the lawyer is, he should at the conference familiarize the lawyer with the medical problems involved, the areas in which he (the physician) feels qualified to testify, and the facts and opinions about which he is prepared to testify.

Court Arrangements

(1) The lawyer should make every effort to be economical in his use of the physician's time. He should give the physician reasonable advance notice of when and how long he shall be needed in court, advise the physician promptly of any changes in the time of his needed appearance, and should call the physician as a witness upon his arrival at court, with as little delay as possible.

(2) The physician has an obligation to be in court at the time requested. He should recognize that only a true emergency will excuse his nonattendance. In the event that such an emergency does arise, he should, as soon as possible, notify the lawyer who requested his appearance in court of his inability to be in court at the appointed time and also advise as to the earliest time he will be available to testify.

Subpoenas

(1) The lawyer should determine whether or not the physician should be served with a subpoena. If the physician is to be served with a subpoena, the lawyer should advise the physician of the reason for serving him; for example, that service of a subpoena is necessary to lay the foundation for a continuance if the physician is unable to attend the trial due to an emergency or other cause. If service of a subpoena is to be had, the lawyer should advise the physician in advance, and if possible, arrange for the service of the subpoena at a time and place satisfactory to the physician.

(2) The physician should recognize that a lawyer may deem it necessary to subpoena the physician, and that the physician is obliged to answer the subpoena as any other citizen. He should cooperate with the lawyer with regard to the time and place of service.

Conduct as a Witness

(1) It is improper for a lawyer to attempt to color or otherwise influence the professional opinion of a physician.

(2) The physician's testimony should be unbiased and given in terms understandable to the jury. He should be prepared to testify in detail as to his qualifications, the medical facts in the case, and to give his frank and honest medical opinion in regard thereto. Technical or medical terms, if used, should be carefully and fully explained. The physician should remember that he is not an advocate trying a lawsuit, nor should he feel that he is taking sides on any particular medical issue or fact.

Conclusion

If the above interprofessional code for physicians and attorneys of Illinois was followed by all parties, the following results might well be attained:

- 1. A greatly improved understanding of each others problems by the members of both professions.
- 2. A considerable savings of time by all participants.
- 3. Better public relations for both groups.
- 4. Better and easier collections of fees.
- 5. Better and more efficient administration of justice.

A suggested form of physician's lien notice is as follows:

NOTICE OF LIEN
In favor of John M. Jones, M.D.
1424 Chestnut Street
Springfield, Illinois

Dated this.....day
of....., 19.....
TO:.....
.....

I am advised that.....,
whose address is.....,
has a claim, right, or cause of action against you for injuries received, resulting from an accident on or about

You are notified that I claim a lien upon such claim, right, or cause of action for reasonable charges for medical services rendered said on account of said injuries, the total amount of such lien not to exceed one-third (1/3) of any sums due or paid to such injured person by compromise, settlement, or satisfaction after the satisfaction of any attorney's lien, if any.

This lien is claimed pursuant to an Act providing for a lien for physicians rendering treatment to injured persons approved July 23, 1959 (Chap. 82, Sec. 101.1 through 101.6, Ill. Rev. Stats., 1965).

Money paid in settlement of this claim or in settlement or payment of any judgment or decree on this claim is subject to this lien, and before making settlement, you should consult with me and see that this lien is satisfied.

.....
Signature

(This notice to be served on both the injured person and the parties against whom such claim or right of action exists, by certified mail or in person.)

Suggested form of authorization to be used by lawyer:

(Place)

(Date)

"I,, hereby authorize and direct....., my attorney, or attorneys to pay from the proceeds of any recovery in my case to Dr..... the reasonable amount for professional services in the treatment of injuries sustained by me and/or my wife and/or child or children, as the case may be, in an accident which

occurred on....., 19....., said payment to include professional services heretofore rendered and those rendered to the time of the settlement or other disposition of my case for the treatment of said injuries, and fees for testifying in court."

"I further authorize said Doctor to furnish said Attorney with any reports he may request in reference to my injury. I understand that this in no way relieves me of my personal responsibility to pay all such medical charges."

Witness

Signed

Reprinted (except for "Conclusion") from Bulletin, Sangamon County Medical Society, March, 1963

ILLINOIS ASSOCIATION OF THE PROFESSIONS

The Illinois Association of the Professions is a nonprofit corporation, incorporated under the laws of Illinois on Feb. 6, 1964. Several other states such as Michigan, New York and North Carolina have already organized associations of professions with the same basic structure and purpose and an American Association of the Professions has been incorporated.

The IAP was created to provide the organizational machinery whereby the combined strength and counsel of all professions can be utilized for the advancement of professional ideals and the promotion of professional welfare. This should strengthen the traditional rights, privileges and responsibilities of each profession. At the same time, it should also provide more effectively to the people adequate professional services based on skill and integrity.

The close relationships between members of the professions place them in a better position to be "molders of public policy." The IAP will devise ways and means of better utilizing the professional knowledge and skills of its members for the benefit of society and attempt to create the kind of relations between the professions which will most effectively accomplish this objective.

IAP is *not* a political organization. It is non-partisan. But it serves its members as one practical medium of communication between the professions and legislative bodies.

IAP supplements efforts, programs and services of the individual state professional societies. The professional societies must function for the profession each represents.

The IAP benefits the individual member by helping him protect and perpetuate the individual privileges and responsibilities of the professional person. It serves as a medium of communication between the professions, devoting its activities to professional relations, public relations, legislation, education, and business services.

Eight state professional societies are Charter Members of the IAP.

Illinois Council of The American Institute of Architects.

Illinois State Dental Society.

Illinois Society of Certified Public Accountants.

Illinois Society of Professional Engineers.

Illinois State Medical Society.

Illinois Pharmaceutical Association.

Illinois State Veterinary Medical Association.

Illinois State Bar Association.

Admission of other professional societies to membership is provided for in the IAP bylaws.

The IAP is governed by a board of directors. On that board *recognition*, rather than *control*, is accorded those professions having larger numbers of individual members. IAP bylaws provide that the board of directors of each state organization shall designate two of its members, who are also members of IAP, to serve as directors. In addition to those thus provided, Directors are also elected from the general membership at the IAP Annual Meeting.

Annual dues for an individual member in IAP is \$10. Annual dues for a professional society organization is \$100. Applications and checks are accepted by the executive secretary of state professional associations for processing.

IAP is a "horizontal" type of organization established to answer some of the professional's problems just as other segments of society are organized. Labor, for example, has the AFL-CIO—cutting across all trades on an industry-wide basis. State and national Chambers of Commerce were created for business and the American Federation of Farm Bureaus, one of the greatest forces in our nation, is the voice of farming.

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EDITORIALS



CHILDREN--HOSPITALS--PARENTS

The title of this editorial literally illustrates the fact that most hospitals in the United States, by restricting visiting hours and rooming-in facilities, maintain the enforced separation of sick children from their parents. The nightly exodus of parents from most hospitals still results in recurrent scenes of fear, crying and other signs of anxiety in hospitalized children. This condition still exists despite the efforts of a number of authorities who have written on the emotional disturbances of children under five who are separated from their mothers by hospitalization. These authorities all agree on the need for the extension and liberalization of visiting hours.^{1, 2, 3} The Illinois Chapter of the American Academy of Pediatrics in 1961 in a statewide survey showed that most hospitals still have sharply restricted visiting privileges. Many hospitals each year have lengthened their visiting hours, but most hospitals have not really considered comprehensive ways of keeping the mother and child as close together as possible.

It is important to note that in England a great majority of the hospitals now allow unrestricted visiting and have expanded rooming-in facilities.⁴ This resulted from the successful effort of a private organization called Mothers Care for Children in

Hospitals. The group has been instrumental in obtaining the official support of the Ministry of Health.

Parents should have the right to be at the bedside of any seriously ill child. This is almost always granted by the administrator of the hospital if the child is placed on the serious or critical list; however, it should be the parents' right and not a privilege extended by the administrator. The physician should have the right to write orders allowing the mothers to stay with the patient when the patient is not critically or seriously ill and when the child-mother relationship is such that separation will be harmful emotionally to the child. Only the physician in charge of the case not the administration of the hospital can determine this situation. The effect of the mother being with her child is as valuable as a written prescription for a tranquilizer.

Many hospital administrators, who would like to liberalize visiting hours for parents, are often prevented from doing so by some doctors and nurses who resent having the parents on the floor. This can be eliminated by having specific rules which would spell out the rights of the parents while visiting, and also list certain procedures the parents would have to follow so as not to interfere

... continued on page 242

If you can't alarm her into wearing elastic stockings...

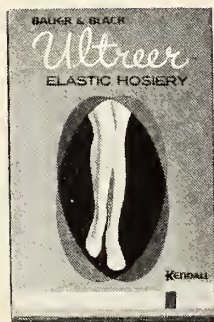
charm her with **Ultreer**TM

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They're that sheer, and shapely and comfortable.

But that's where the similarities end. New Ultreer fits firmly and evenly over the entire leg. Gives true therapeutic compression necessary to relieve varicose veins and other leg disorders. Each pair provides the therapy you prescribe. And at such a low price, a woman can afford two pairs of Ultreer as easily as she can afford one pair of ordinary elastic hosiery.

Ultreer. What a stocking.



... continued

with the nurses or the physicians duties. Parents would have to help with the nursing of their children. This has worked out very well in hospitals who have adopted unrestricted visiting and rooming-in facilities.

Another barrier to the liberalization of visiting hours in pediatric departments is the practice of continuing to build two or four bed rooms with rarely a provision for private rooms large enough, so that a mother can sleep in the same room with the child.

Some doctors defend limited visiting as a method of controlling infection. It has been shown that most infections in hospitals are spread by hospital personnel.

What can be done to encourage the elimination of strict visiting hours? Some parents have formed organizations to campaign for more liberal visiting hours in hospitals. According to Mann, mothers have organized over 40 groups in this country, whose objectives are similar to those of the Mothers Care for Children in Hospitals organization in England.⁵

Architects, administrators and hospital

planners should consider private rooms and rooming-in facilities for mothers in planning for pediatric departments. The administrators of the Hill-Burton Act should take a closer look at the design of the pediatric departments before the allocation of money.

Pediatricians, general practitioners and hospital administrators should initiate campaigns in each of their hospitals to allow unrestricted visiting of the parents and plans for rooming-in facilities in their hospitals.

The parent excluded from being with a sick child can be the wife of the physician reading this editorial.

Harvey Kravitz, M.D.

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ACROMEGALY

The studies reported herein disclose that in a patient with active acromegaly, in whom the growth hormone response to physiologic stimulus of hypoglycemia is preserved, a variety of agents may be tested for their effectiveness in blocking this response. It is of interest that growth hormone secreting tumors, unlike most other endocrine tumors, may maintain responsiveness to a normal physiologic stimulus. The magnitude of response to insulin-induced hypoglycemia could not be blunted by administration of either estrogen or androgen in the form and dosage we used. Administration of a glucocorticoid in a dose equivalent to more than 60 mg per day of cortisol has been shown to be effective in inhibiting the release of growth hormone in normal subjects. Dexamethasone in an amount equivalent to 80 mg of cortisol per day, administered for three weeks, did not block the growth hormone response to the standard insulin tolerance test. Therefore a glucocorticoid dose greater than that shown to be effective in suppressing growth hormone in normal individuals was without effect in the acromegalic subject. *California Medicine*, January 1966.



Jim
Nathans[†]
sat
here
←

before he started on Obedrin-LA

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- Suppresses appetite and lifts mood
- Allays anxiety and counteracts excess stimulation
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[†]of Chestnut Hill, Pa.

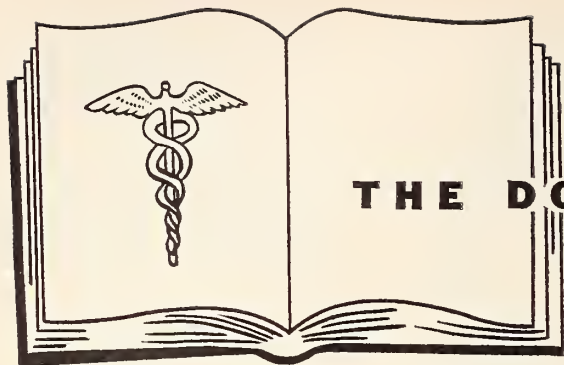
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*U.S. Pat. Nos. 2,736,682; 2,809,916; 2,809,917; 2,809,918 and pat. pend.

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THE DOCTOR'S LIBRARY

PATHOLOGY ANNUAL: 1966. Edited by Sheldon C. Sommers, M.D. Publishers: Appleton-Century-Crofts, New York. Price \$12.00. Publication Date: April 1966. 387 pages.

This book consists of 14 chapters on various subjects of interest in pathology. The majority of the chapters cover in depth the classical pathological changes in certain diseases. For instance, the chapter on schistosomiasis covers 58 pages, has 46 illustrations, 158 references and does an excellent job of summarizing our present knowledge of the subject. A chapter on functioning ovarian tumors stresses the recent developments in the morphological aspects of the subject. The chapter on mesenteric vascular occlusion reports on the use of a post mortem injection technic to estimate the extent and topography of disease. The chapter on the placenta discusses some of the conditions which may be reflected in the gross and microscopic appearance of the placenta and adnexa. In another chapter, "Recent Advances in Pathology in Africa," the pathological changes in Buruli ulcer, subcutaneous phycomycosis and idiopathic tropical splenomegaly are described. A chapter on lung cancer reports a multidisciplinary study of surgically resected specimens in an attempt to identify cell types in relation to biologic potential. The chapter on encephalitis outlines our knowledge of the anatomical changes in this difficult field.

Recent advances in investigative pathology are covered in other chapters. An article on glomerulonephritis emphasizes the application of experimental studies to the understanding of human inflammatory vascular disease. The chapter on diabetic renal disease correlates histopathological changes with changes detected by the electron microscope. The chapter on the adrenal gland is intended to assist the pathologist in the morphologic evaluation of the understanding of disease processes of this organ. In another chapter the new information obtained by modern methods of study in regard to the pathology of the islets of Langerhans is presented.

In addition, there is an excellent chapter on the use of data processing in pathology with particular application to the use of the *Systematized Nomenclature of Pathology*, devised by the College of American Pathologists. There is a chapter on carcinoma of the cervix, demonstrating the importance of early detection and treatment in the pre-invasive form. In the final chapter, the important

role of the pathologist as the hospital biologist is emphasized.

This group of essays by experienced pathologists, all qualified experts in their fields, should be of value to the practicing pathologist who has the ultimate responsibility for diagnosis.

Joseph C. Sherrick, M.D.

BIOLOGICAL EFFECTS OF ASBESTOS. Edited by Harold E. Whipple. Annals of the New York Academy of Sciences, Volume 132, Art. 1, pages 1-766. Published by the Academy, New York, December 31, 1965.

This volume is the result of a conference entitled, "Biological Effects of Asbestosis," sponsored by the New York Academy of Sciences, held in October 1965. The conference was attended by men from England, Italy, Canada, Australia, Finland, Germany, the United States and South Africa. These men were selected not only from the field of occupational hygiene but also from such unrelated fields as physical chemistry, experimental pathology, oncology, epidemiology and many others. They all had one thing in common, that is, an interest and experience in asbestosis.

It is obvious, therefore, that the subject was covered very comprehensively both in depth as well as in scope. Of interest is the fact that the working group made the world aware of the statistically significant incidence of neoplasia, both intrathoracic and intra-abdominal, in cases of asbestosis. For example, in the series of cases who had asbestosis and died in this country, 40.4% had cancer of one kind or another.

The volume is divided into the following sections: Asbestos materials in modern technology; Lung tissue and mineral matter; Problems of pathogenesis; Human exposure to asbestos: Industrial populations, Community studies, Dust controls and standards; Clinical studies of pulmonary asbestosis; Asbestos and neoplasia: Experimental, Epidemiological, Diffuse mesothelial tumors; and lastly, Problems and perspectives. An appendix includes the recommendations of the group on asbestosis and cancer as well as on dust diseases and workmen's compensation.

This is a well prepared volume and should serve as an excellent source of material on most, if not all, of the facets of asbestosis.

Paul B. Putong, M.D.

... continued on page 250

Once merely a man with HAY FEVER— now a victim of his own antibodies

Whatever term describes him in this new era of immunology, the symptoms of congested nose, rhinorrhea and sneezing haven't changed in patients hypersensitive to pollens and molds. But NTZ[®] Nasal Spray relieves the symptoms. It decongests nasal membranes on contact, relieves itching and reduces excessive rhinorrhea without unpleasant dryness. The first spray of well-tolerated NTZ shrinks the turbinates, helps restore normal nasal ventilation and breathing. After a few minutes, a second spray enhances sinus ventilation and drainage.

More than a simple vasoconstrictor, the carefully balanced formula of effective components relieves in three ways with:

Neo-Synephrine[®] HCl 0.5%, a decongestant of excellent efficacy to shrink nasal membranes and allow more comfortable breathing.

Chenfadil[®] HCl 0.1%, a topical antihistamine to help relieve itching and rhinorrhea.

Benephiran[®] Cl 1:5000, an excellent wetting agent and antiseptic preservative to promote the rapid spread of components to less accessible nasal areas.

Applied in convenient pocket-size plastic spray bottle of 20 ml. Also available as a solution of 30 ml. (1 fl. oz.) with dropper, and 473 ml. (1 pint).

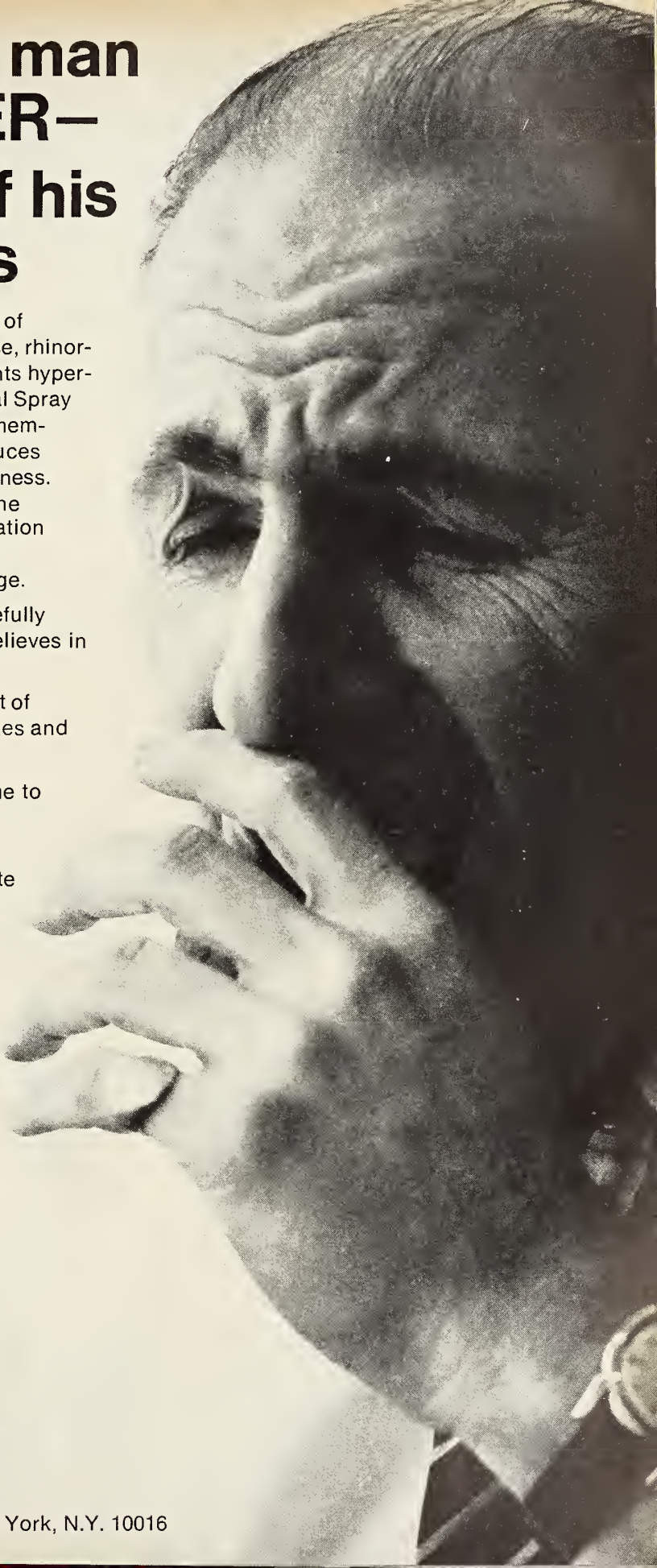
Prescribe

NTZ[®] Nasal Spray

(contains Neo-Synephrine HCl)

Winthrop

Winthrop Laboratories, New York, N.Y. 10016



NEW PHARMACEUTICAL SPECIALTIES

by Paul deHaen

For detailed information regarding indications, dosage, contraindications and adverse reactions, refer to the manufacturer's package insert or brochure.

Single Chemicals — Drugs not previously known, including new salts.

Duplicate Single Products—Drugs marketed by more than one manufacturer.

Combination Products—Consisting of two or more active ingredients.

New Dosage Forms—Of a previously introduced product.

BIOLOGICALS

M-VAC

R

Manufacturer: Lederle Laboratories

Composition: Measles virus vaccine, live, attenuated (Edmonston strain).

Indications: Immunization of infants, children and susceptible adults against measles (rubella).

Dosage: Reconstituted contents of one vial (approximately 0.5 ml.). Standardized gamma globulin should be used concomitantly to minimize side effects.

Supplied as: Single dose vials with a disposable, diluent-containing syringe. Package of 1, 12, 24.

DUPLICATE SINGLE PRODUCTS

R

CENALENE-M Analeptic

Manufacturer: The Central Pharmacal Company

Composition: Pentylenetetrazol N.F.

Indications: Analeptic for older patients with mental confusion, apathy and memory defects.

Causes increased oxygenation of the blood and increased cerebral blood flow.

Dosage: Two tablets three times daily after meals.

Supplied as: Tablets 100 mg. Bottles of 100, 500, 1000.

KAY CIEL Electrolyte Replacement

R

Manufacturer: Brewer & Co., Inc.

Composition: Each 5 cc contains: Potassium chloride 0.5 Gm. in a cherry-flavored syrup with no sugar added.

Supplies 6.70 mEq. of elemental potassium.
Indications: Oral Potassium therapy. Useful with modern diuretics and corticosteroid hormones to replace excretory potassium losses.

Dosage: Adults: one teaspoonful in a half glass of water.

Supplied as: Syrup. Bottles of one pint.

COMBINATION PRODUCTS

FLURESS Eye Preparation

R

Manufacturer: Barnes-Hind Ophthalmic Products

Composition: Fluorescein0.25%
Benoxinate HCl0.4 %
in a sterile, isotonic boric acid buffer with vinylpyrrolidone and distilled water.

Combined anesthetic and disclosing agent.

Indications: Simplification of applanation tonometry.

Dosage: One drop, as indicated.

Supplied as: Glass bottle 5 cc, with separate sterile dropper.

SURBEX-T w/Dextrose 5% Parenteral

R

Vitamins

Manufacturer: Abbott Laboratories

Composition: Each 1000 cc. contains:

Dextrose50 Gm.
Vitamin C1 Gm.
Vitamin B-10.25 Gm.
Vitamin B-20.05 Gm.
Niacinamide1.25 Gm.
Vitamin B-60.05 Gm.
Dexpantenol0.5 Gm.

Indications: Patients requiring additional Vitamin C and B-complex, where moderately severe deficiencies are suspected.

Dosage Intravenously. 1000 cc. administered as a slow infusion over a 2 hour period or longer, at no more than 8 cc per minute. Individualized in accordance to requirements.

Supplied as: Parenteral solution; 500 and 1000 cc.

NEW DOSAGE FORMS

CENALENE-M Analeptic

R

Manufacturer: The Central Pharmacal Company

Composition: Each 5 cc contains: Pentylenetetrazol N.F. 100 mg. (Alcohol 15%, sugar-free.)

Indications: Analeptic for older patients with mental confusion, apathy and memory defects.

Causes increased oxygenation of the blood and increased cerebral blood flow.

Dosage: Two teaspoonsful three times daily after meals.

... continued on page 249



among the most significant drugs in use today

CHLOROMYCETIN

(CHLORAMPHENICOL)

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

Complete information for usage available to physicians upon request.



92666



for tranquility in the geriatric syndrome

No age is exempt from anxiety, but emotional resiliency tends to run especially low in the later years. For elderly patients, such events as death of a spouse, decline in physical health, change of environment, or loss of financial security may come as overwhelming burdens.

When your geriatric patient responds to such problems with anxiety, you can counteract the emotional distress promptly with Atorax, the unique and effective tranquilizer. Atorax is particularly suitable for the elderly because, with its outstanding safety record, there is usually no need to lower the dosage

as is the case with many other tranquilizers; the suggested initial dosage for geriatric patients is 50 mg., q.i.d. Atorax can be used concomitantly with many other drugs, including digitalis; and it is helpful in relieving nervousness associated with many organic diseases common to old age. The variety of dosage forms permits flexibility of administration to suit convenience, patient preference, or special requirements.

RoeriBeC® (B complex plus 500 mg. C)

In medical surgical after-care you can't overstress it

Resistance—Recovery—RoeriBeC

optimal dosage/optimal results

ATARAX[®]
(hydroxyzine HCl)

J. B. Roerig and Company
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being®
New York, New York 10017

tablets, syrup, parenteral

Indications and adverse reactions: The transitory drowsiness which occurs with hydroxyzine HCl usually disappears spontaneously within a few days with continued therapy, or is correctable by dosage reduction. Dryness of the mouth may be seen with higher doses. Transitory motor activity, including rare instances of tremor and convulsions, has been reported, usually on higher than recommended dosage. **Hydroxyzine HCl may potentiate barbiturates, narcotics such as meperidine, and other CNS depressants.** In case of concurrent use, dosage for these drugs should be decreased as much as possible. Because drowsiness may occur, patients should be cautioned against driving a car or operating dangerous machinery.

General Solution Precautions and contraindications: This dosage form is intended only for I.M. or I.V. administration and should not, under any circumstances, be injected subcutaneously or intra-arterially. When the usual precautions for I.M. injection have been followed, reports of soft tissue reactions have been infrequent. When used intravenously, if given undiluted, minimal amounts of hemolysis (2-3 grams of liberated hemoglobin) will occur. If diluted with 50 cc. of normal saline and given during a period of 15 minutes or more, this phenomenon does not occur. Due to the risk of thrombosis and infrequent phlebitis, the rate of injection must not exceed 25 mg. per minute. A single I.V. administration in excess of 50 mg. is not recommended. Particular care should be used to inject only into intact veins; a few instances of digital necrosis occurring distal to the injection site have been attributed to inadvertent intra-arterial injection or periaxillary extravasation, both of which should be avoided. **Use in Pregnancy:** When administered to rats at high dosage, hydroxyzine induced fetal abnormalities. Until human clinical data are available adequate to establish safety in early pregnancy, hydroxyzine is contraindicated in early pregnancy.

New Pharmaceutical Specialties

... from pg. 246

Supplied as: Elixir. Bottles of pints and gallons.

FURACIN-HC Ear Preparations R

Manufacturer: Eaton Laboratories

Composition: Each 7.5 cc contains:

Nitrofurazone0.2%

Hydrocortisone acetate1.0%

in a water-soluble hygroscopic base of glycerin and polyethylene glycol.

Antibacterial and antiinflammatory combination.

Indications: Bacterial otitis media externa and bacterial otitis media. Not effective if tympanic membrane is intact.

Dosage: 0.5 cc instilled into the canal 3 times daily.

Supplied as: Ear drops. Bottle of 7/5 cc with dropper.

GRISACTIN Antiinfective, fungicide-systemic R

Manufacturer: Ayerst Laboratories

Composition: Griseofulvin (Microsize)

Indications: Ringworm infections of the skin, hair and nails; tinea corporis, tinea pedis, tinea cruris, tinea barbae, tinea capitis and tinea unguium (onychomycosis)

Dosage: Adults: 0.5 Gm. daily (125 mg. q.i.d. or 250 mg. b.i.d.) Dosage should be individualized.

Children: 10 mg./Kg. Children from 30 to 50 lbs., 125 mg. to 250 mg. daily; children over 50 lbs. 250 mg. to 500 mg. in divided doses. Dosage should be individualized.

Supplied as: Capsules 125 mg. and 250 mg. Bottles of 100, 500.

PENBRITIN Antibiotic—Penicillin, semisynthetic R

Manufacturer: Ayerst Laboratories

Composition: Ampicillin Anhydrous

Indications: Infections due to susceptible strains of Gram-negative bacteria (Shigella; Salmonella, including *Sal. typhosa*; *E. coli*; *H. influenzae*; *P. mirabilis*) also indicated in infections due to susceptible strains of Gram-positive bacteria. Recommended in urinary tract infections; respiratory tract infections; and gastrointestinal infections.

Dosage: Adults: Urinary tract infections, 500 mg. every 6 hours. Respiratory tract infections, 250 mg. every 6 hours. Gastrointestinal infections 500 mg. every 6 hours.

Children: Based on weight and severity of infection, 100 mg. to 200 mg./kg./day in divided doses, every 6 to 8 hours.

Supplied as: Oral suspension. Bottles of 80 cc reconstituted—125 mg./5cc. Bottles of 80 cc reconstituted—250 mg./5cc.

BOOK REVIEWS

... continued

An Atlas of Fine Structure—THE CELL—Its Organelles and Inclusions, by Don W. Fawcett, M.D. 448 pages. W. B. Saunders Company, Philadelphia and London, January 31, 1966. Price \$11.00. 240 illustrations.

The book considers the fine structure of the cell under three main headings, cell organelles, inclusions and the cell surface. Under each heading are listed the various entities such as the nucleus, endoplasmic reticulum, etc. Some of these are subdivided into their component structures. A fine feature of this book is the brief but concise discussion presented at the beginning of each cell structure to be illustrated. The cellular constituents are well illustrated in different magnifications and several examples are shown to depict the various forms a structure may present within the cell.

The illustrations are well chosen and are of excellent quality. Important details that might otherwise escape the student or a novice in electron microscopy are pointed out by appropriate arrows.

This book is an excellent comprehensive atlas of the fine structure of the cell. The style of presentation makes for ease of reading as well as understanding. The atlas should be a welcome aid both to the medical student and to the budding investigator of cell biology.

Paul B. Putong, M.D.

PHARMACOLOGY OF THE CORONARY CIRCULATION, 1st Edition, By N. V. Kaverina. 267 pages. Pergamon Press, Ltd. 1965.

This book is concerned with the experimental pharmacology of the coronary circulation. The first section reviews the present knowledge of the physiology and pharmacology of the coronary circulation, while the other sections deal with drugs that affect the circulation, either by peripheral action, or by central action. The information is based on the original experimental work of the author on assessing the state of the coronary circulation by measuring the volume rate of coronary blood flow, the resistance of the coronary vessels, the oxygen consumption of the cardiac muscle, and the work performed by the heart. In this way he studied substances acting on the efferent nerves to the cardiac vessels with adrenomimetic action, cholinomimetic action, cholinolytic action and ganglion-blocking action. He also studied substances affecting the central control of the coronary circulation, such as analgesics, nitrites and nitrates; and, in addition, tested a new group of pharmacological substances which have an effect on the coronary circulation—the phenothiazine derivatives.

Starting with the assumption that improvement of the coronary circulation may result from vasodilatation, from abolition of spasm produced by reflexes, or by improvement of the metabolism of the myocardium, the author's studies show that many of the traditional ideas about action of drugs cannot be verified under experimental conditions. His careful studies make a definite contribution to our understanding of the coronary circulation.

The translation by Dr. R. Crawford is excellent. Unfortunately, some of the drugs mentioned are not well known in this country. For instance, Chloracizine, 10 (β -diethylaminopropionyl)-2-chlorophenothiazine, characterized as a new and effective agent for improving the blood supply to the heart, does not seem to be available in this country.

Joseph C. Sherrick, M.D.

MICROHEMOCIRCULATION: Observable Variables and Their Biologic Control, by Elio Maggio, M.D., F.I.C.A. 194 pages, 94 illustrations. Price \$16.50. Springfield, Illinois. Charles C Thomas, Publisher, 1965.

This book is a condensation of Dr. Maggio's book, "*Micro-e macro-emocircolazione*," which was published in Italy in 1962. It is devoted to the microhemocirculation, which, according to the author's definition, is the circulation of blood in vessels 2-250 μ . in diameter. The author has devised several original methods for the observation of the microhemocirculation, which have been employed in a systematic study of small blood vessels and surrounding tissue during physiological conditions and after local injury. The methods used did not produce significant trauma to the preparation, and allowed for prolonged observation under various conditions.

The author's investigations confirm the basic concept that the tissue reaction to injury is, in general, a non-specific one, varying only in degree of response to different types of injury. In addition, the author has demonstrated that the reaction of micro vessels does not depend on that of macro vessels, and that the reaction consists primarily of intravascular aggregation of erythrocytes and thrombo-embolism. He believes that arteriolar spasm is less important than the changes in the venous and capillary beds. He has shown that the local reaction of the surrounding connective tissue is striking and may be fundamental to the inflammatory reaction. Degranulation of mast cells releases powerful vasoactive substances, which serve both to rebuild the polysaccharides lost during the injury and to regulate the microhemocirculation.

This is the first American publication of its kind on the microhemocirculation. It is characterized by the comprehensive extent of its study and the critical quality in which the information is presented. These attributes should make it useful for research workers in this field.

Joseph C. Sherrick, M.D.

LOOKING FOR A PLACE TO PRACTICE?

PLACEMENT SERVICE LISTS OPENINGS

BOONE COUNTY: Belvidere, population 12,000. Population of trade area, 25,000. Rapid growth in population due to opening of new Chrysler Plant. Population will soon reach 30,000 due to new recruitment program. 10 general practitioners—no specialists. Members of county medical society anxious for general practitioners, internists and obstetricians to locate here. Two hospitals—St. Joseph's, 100 beds, Highland, 75 beds. 15 miles from Rockford, population 125,000. 2 prescription drug stores. Office space available. Housing situation critical, but members of profession will assist an interested physician. Agricultural and industrial area. 14 Protestant and Catholic churches. Public and parochial schools. Country club with golf course. 38 miles from Lake Geneva, Wisconsin. Belvidere on Northwest Tollway, only 75 miles from Chicago.

DEKALB COUNTY: Sandwich. Population: 5,200. Estimated population of trade area—15,000. William S. Kenshol, M.D. in need of an associate due to heavy patient load. Salary leading to partnership to be drawn up by Professional Business Management. Office: 4 examining rooms, fully equipped, x-ray, lab, EKG, physical therapy: to be expanded if association mutually satisfactory. Four additional general practitioners in community. Sandwich Community Hospital, 65 beds; fully accredited; excellent X-ray and lab facilities and physical therapy department. Sources of income: agriculture and light industry. 10 Protestant and Catholic churches. 3 grade schools; new high school built in 1966. Nearest college: Northern Illinois University. Organizations include Lions, Rotary, VFW, Moose, PTA, Business Men's Association, etc. 18 hole golf course to be completed this year. Lake Holiday — swimming, boating and fishing. 25 miles from Aurora, population 50,000. 1 hour drive from Chicago Loop. Anticipated 2,000 new homes by 1968 within 10 mile radius. Approved nursing home in town. Active local program for mentally retarded.

LASALLE COUNTY: Mendota. Population: 6,714. Population of trade area: 24,000. Several small towns in trade area without physicians. 6 practicing physicians; one is leaving July 1, 1966 to take a residency; replacement needed. Mendota Community Hospital—70 beds. Nearest large city, Rockford, population 131,000—50 miles. 3 prescription drug stores. A newly constructed medical building is available July 1, 1966 on a rental basis—full equipped. M. Erdmann, architect. Designed for two physicians;

occupied by one. Equipment of physician who is leaving available if desired. Predominant nationality — German. Sources of income: agriculture and industry. 11 Catholic and Protestant churches. Grade and high schools. Organizations include Elks, Kiwanis, Moose, Lions, Rotary, VFW, Masons, BSA, Chamber of Commerce, Newcomers, etc. Recreational facilities include 9 hole golf course, new swimming pool and tennis courts. Rapidly expanding industries in town.

LASALLE COUNTY: Tonica. Population—850. Estimated population of trade area—3,000. Several small towns in trade area without physicians. Only physician retired recently. Nearest physicians: 5, 10 and 18 miles. Nearest hospitals at Streator, LaSalle, and Peru, 18, 10 and 11 miles distant. Nearest large city—Peoria—65 miles. New office building of retiring physician available. His equipment also available if desired. Agricultural area. Methodist church. Grade and high schools. Adequate recreational facilities available in nearby LaSalle and Peru.

MADISON COUNTY: Highland; population 5,000. Only 4 physicians, as compared to 9 and 10 in the past. St. Joseph's Hospital, 175 beds—2 million dollar modern well-equipped accredited hospital, receives patients from a radius of 25 miles in all directions. Local physicians all over-worked and anxious to have others locate here. Located 40 minutes from downtown St. Louis, Missouri. Excellent public and parochial schools. Protestant and Catholic churches. Unusual recreational facilities including Highland Country Club with golf course. Several small industries locally and many residents commute to St. Louis. Excellent office facilities including space in a new professional building, where room is being reserved for another physician—includes reception room, secretary's office, 3 examining rooms, etc. Many residents of Swiss and German background. Two local banks have total assets of over \$13 million. Three drug stores.

BUREAU COUNTY: Neponset: population 520. Estimated population of trade area: 2,200. Community without a physician since July 15, 1963. Nearest physicians at Kewanee, Sheffield and Princeton, 8, 6, and 20 miles. Nearest hospital at Kewanee, 9 miles. Nearest large city, Peoria, 50 miles. Fully equipped physician's office for sale or for rent. Apartments and houses for rent. Local Chamber of Commerce will arrange for financial assistance if desired. Agricultural area, 2 industries. Congregational

and Methodist churches. Grade and high schools. Excellent library. Nearest college at Galesburg, 50 miles. Nearest country clubs at Sheffield and Kewanee. Public swimming pools and golf courses at Sheffield, Kewanee and Princeton. Former physician, who moved to return to his former home town, enjoyed a large practice.

BUREAU COUNTY: Wyanet. Population 1,020. Community without a resident physician since 1962; physician who had practiced there for 25 years moved following marriage. Nearest physicians at Princeton, 6 miles, and Sheffield, 10 miles. Nearest hospital at Princeton, 125 beds. Prairie View Nursing Home, 150 beds. 50 miles from Peoria. No local drug store, but two in nearby Princeton. Good office facilities available. New houses for sale or for rent. Financial assistance could be arranged if desired. Agricultural community. Churches: Methodist, Baptist, Catholic, and Wesleyan Methodist. Grade and high schools. Nearest college at LaSalle, 20 miles. Organizations: Masonic Lodge, VFW, PTA, Chamber of Commerce. 3 nearby country clubs with golf courses. Nearest swimming pools within six miles radius. Two bowling alleys.

CARROLL COUNTY: Lanark. Population 1,500. Trade area—3,000. Town had two active physicians until recently; only one at present time (in limited practice due to health). Nearest hospital at Savanna, 18 miles. Nearest large city, Rockford, 50 miles. Local prescription

drug store. Sources of income: agriculture and industry. Churches: Methodist, Lutheran, 2 Brethren and Faith Reform. Grade and high schools—consolidated. Nearest college at Mt. Carroll, 10 miles. Organizations: Lions Club, Masonic Lodge, American Legion, etc. Local country club with golf course. Private golf club and public at nearby Freeport—36 holes. Description of available office: constructed from an older home in a quiet residential district. Home remodeled with parking lot on one side. New two stall garage. 6 room apartment above the office; ultra-modern. Office recently remodeled: paneled walls, built in FM system, inter-office communication system; X-ray room, surgical room, lab, pediatric room, 2 treatment rooms, drug room, nurse's station, bath. Both apartment and office are completely air conditioned and each has separate heating systems.

EFFINGHAM COUNTY: Beecher City; population 500. Community without a physician for over three years, when only physician retired. Nearest physicians at Effingham, 15 miles and Cowden, six miles. Nearest hospital at Effingham. Nearest large city, Decatur, 60 miles: population 78,004. No drug store at this time. Community will provide a building for a physician or loan money to him. Churches: Methodist, EUB, and Christian. Grade and high schools. Nearest college, 45 miles—Eastern Illinois University. Active Kiwanis Club and P.T.A. Adequate recreational facilities. Active Masonic Lodge and Eastern Star.

HOSPITALS AS A MARKET

Looking at the hospital market, some trends are suggested:

1. Increasing demands for health services.
2. Increasing demands for higher standards of health services.
3. Increasing utilization of hospitals.
4. Increasing population centralization and increasing hospital size.
5. Increasing expenditures by hospitals.
6. Increasing numbers of personnel and labor costs.

These trends, in turn, suggest some needs, many of which can be appropriately interpreted as product and service needs to be answered by health industries. Perhaps the best example of such an interpretation is the growing response to hospital needs for patient safety, for efficiency in patient care and for overall economies. *Hospitals*, December 1, 1965.



An eminent role in medical practice

- Clinicians throughout the world consider meprobamate a therapeutic standard in the management of anxiety and tension.
- The high safety-efficacy ratio of 'Miltown' has been demonstrated by more than a decade of clinical use.

Miltown®

(meprobamate)

Indications: Meprobamate is effective in relief of anxiety and tension states. Also as adjunctive therapy when anxiety may be a causative or otherwise disturbing factor. Although not a hypnotic, meprobamate fosters normal sleep through both its anti-anxiety and muscle-relaxant properties.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate or meprobamate-containing drugs.

Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses.

Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Usual adult dosage: One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

Supplied: 'Miltown' (meprobamate) is available in two strengths: 400 mg. scored tablets and 200 mg. coated tablets. 'Mepro-tabs' (meprobamate) is available as 400 mg. white, coated, unmarked tablets. *Before prescribing, consult package circular.*

WALLACE LABORATORIES
Cranbury, N.J.

CM-7814



Rx Reviews

and New Products

New Packaging for Cortisporin

Cortisporin Otic Drops (Polymyxin B—Neomycin—Hydrocortisone), a product for the most commonly cultured pathogen in otitis externa (*pseudomonas*), is now available in a new 10 cc. packing as well as the familiar 5 cc. bottle.

This new package will enable physicians to prescribe the product for prolonged or chronic treatment with significant savings to their patients. It is available now from all B. W. & Co. Wholesalers.

Schering Introduces Tinactin Cream

Tinactin Cream, a new dosage form of Tinactin (tolnaftate), was introduced by Schering Laboratories, Division of Schering Corporation.

The new form is being marketed to fill the needs of those physicians and patients who prefer this form of medication as an addition to the 1% solution introduced a year ago as a topical fungicide.

Tinactin Cream, a prescription drug, is formulated to achieve the same results as the solution in the treatment of superficial fungus infections of the feet, groin, body and hands. Studies by 20 physicians involving several hundred patients to date have demonstrated that this product clears ringworm of the groin and body in from 85 to 90 per cent of cases and athlete's foot in between 75 to 80 per cent of patients treated.

Clinical investigation has also shown that Tinactin Cream is equally effective in the treatment of chronic and acute superficial fungus infection in adults and children.

Neo-Synephrine Used to Potentiate Pontocaine Spinal Block Anesthesia

Spinal block anesthesia with Pontocaine is more effectively potentiated by a 5 mg. dose of Neo-Synephrine than by the addition of epinephrine, according to Drs. Ronald P. Meagher, Dainel C. Moore and John C. DeVries, Medical Anesthesia Associates, Everett, Washington.

Writing in *Anesthesia and Analgesia* (43:134, 1966), they review 1671 cases of spinal block over a 17-year period. Mean duration of anesthesia with the two agents during surgery in 1129 patients was 214.6 minutes, or 78.8 per cent longer than with Pontocaine alone. Forty-two of the patients required supplementary anesthesia after 180 minutes, thereby changing the mean duration to 252.9 minutes, 110.8 minutes longer anesthesia than with Pontocaine.

In a detailed study of 100 consecutive, non-selected patients in the series, a mean operative duration of 215.8 minutes was obtained, amounting to a 79.8 per cent increase over Pontocaine alone. Objective observation, based on regression of analgesia by two sensory dermatomes, demonstrated a mean duration of 273.6 minutes, a 128 per cent increase.

The investigators state that the mean duration of subjective pain return was 312.9 minutes, and any type of motor return was 296.4 minutes.

Average onset time of anesthesia with Pontocaine was 5-10 minutes; with Pontocaine and Neo-Synephrine 10-15 minutes.

There were no systemic reactions to Neo-Synephrine injected into the subarachnoid space, nor any cases of serious or permanent neurologic sequelae.

Both anesthetics and the vasoconstrictor drug are manufactured by Winthrop Laboratories.

Disposable Doctor's Jacket

A good-looking, comfortable, disposable white jacket for doctors and dentists, priced under \$1.00—is now available from Professional Disposable Products, Inc., Mount Vernon, New York.

It is made of Kaycel, a sanitary, yarn-reinforced cellulose fabric that is soft, strong, wears well and drapes and breathes like cloth. A box of 24 jackets sells for \$21.80. Other items also available.

... continued on page 260

Behind continued high blood pressure readings lies the possibility of organic damage¹⁻¹³

MANY OF THE aspects of essential hypertension are unpredictable—either because there are a number of mechanisms involved or because individuals differ in their responses to these mechanisms.¹

There is one aspect of hypertension, however, that seems, in many cases, predictable. "... when the blood pressure is elevated to a marked degree for an adequate period of time, this in itself leads to perpetuation of the syndrome with resulting vascular damage throughout the body."¹⁴ All too often the disease progresses until there is damage to one of three vital organs: the heart, the kidney, the brain.



"Hypertension is certainly a major factor in the genesis of coronary heart disease, and it is even more important when compounded with obesity."⁴

"[Vascular deterioration] can be clearly seen in the kidney with a degree of damage that can be measured by renal function studies."¹⁰

"... most evidence suggests that reduction of blood pressure, when it is too high, not only relieves the heart of excess work but reduces vascular damage."¹

"In short, treatment is indicated."¹

Antihypertensive therapy will not restore the blood vessels to normal. Yet many of the vascular changes and symptoms caused by increased blood pressure may be arrested or alleviated when the blood pressure is reduced to normotensive levels.⁷

Reducing the blood pressure helps curtail further vascular damage and improves the prognosis — when damage is not too far advanced before therapy is started.¹⁴ Essential hypertension is an indication not only for treatment, but for early and adequate treatment of the patient in question.

Reduce the blood pressure with Rautrx-N

Rautrx-N combines the antihypertensive-tranquilizing action of whole root rauwolfia with the antihypertensive-diuretic action of bendroflumethiazide in one convenient medication. The two drugs complement each other

so that smaller doses of both are possible.

Rauwolfia combined with bendroflumethiazide is particularly effective in long-term therapy,¹⁵⁻¹⁷ since beneficial effects do not diminish with continuous daily administration.

For most patients 1 or 2 Rautrx-N tablets daily are sufficient for maintenance therapy. The simplicity, convenience and economy of such a dosage schedule are of particular benefit to older patients.

References: 1. Page, I. H., and Dustan, H. P.: The Usefulness of Drugs in the Treatment of Hypertension, in Ingelfinger, F. J.; Relman, A. S., and Finland, M.: *Controversy in Internal Medicine*, Philadelphia, W. B. Saunders Co., 1966, p. 95. 2. Hollander, W.: The Evaluation of Antihypertensive Therapy of Essential Hypertension in Ingelfinger, F. J.; Relman, A. S., and Finland, M.: *Controversy in Internal Medicine*, Philadelphia, W. B. Saunders Co., 1966, p. 97. 3. Nickerson, M.: Antihypertensive Agents and the Drug Therapy of Hypertension, in Goodman, L. S., and Gilman, A.: *The Pharmacological Basis of Therapeutics*, ed. 3, New York, The Macmillan Co., 1965, p. 727. 4. Berkson, D. M.: *Indust. Med. & Surg.* 32:371, 1963. 5. Cohen, B. M.: *M. Times* 91:645, 1963. 6. Lee, R. E., et al.: *Am. J. Cardiol.* 11:738, 1963. 7. Moyer, J. H.: *Am. J. Cardiol.* 9:821, 1962. 8. Moser, M.: *New York J. Med.* 62:1177, 1962. 9. Wood, J. E., and Battey, L. L.: *Am. J. Cardiol.* 9:675, 1962. 10. Moyer, J. H., and Heider, C.: *Am. J. Cardiol.* 9:920, 1962. 11. Moser, M., and Macaulay, A. I.: *New York State J. Med.* 60:2679, 1960. 12. Judson, W. E.: *Nebraska M. J.* 44:305, 1959. 13. Hodge, J. V.; McQueen, E. G., and Smirk, H.: *Brit. M. J.* 1:5218, 1961. 14. Moyer, J. H., and Brest, A. N.: *Hypertension Recent Advances*, Philadelphia, Lea & Febiger, 1961, p. 633. 15. Berry, R. L., and Bray, H. P.: *J. Am. Geriatrics Soc.* 10:516, 1962. 16. Reid, W. J.: *J. Am. Geriatrics Soc.* 13:365, 1965. 17. Feldman, L. H.: *North Carolina M. J.* 23:248, 1962.

Contraindications: Severe renal impairment or previous hypersensitivity. **Warning:** Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting or G.I. bleeding occur.

Precautions and Side Effects: The dose of ganglionic blocking agents, veratrum or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Caution is indicated in patients with depression, suicidal tendencies, peptic ulcer; electrolyte disturbances are possible in cirrhotic or digitalized patients. Marked hypotension during surgery is possible; consider discontinuing two weeks prior to elective surgery and observe patients closely during emergency surgery. Rauwolfia preparations may cause reversible extrapyramidal symptoms and emotional depression, diarrhea, weight gain, edema, drowsiness may occur. Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients, and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, rashes may occur.

Dosage and Supply: Initial dosage, 1 to 4 tablets daily, preferably at meal-time. Maintenance, 1 or 2 tablets daily. Rautrx-N is supplied as capsule-shaped tablets containing 50 mg. Rauwolfia serpentina whole root (Raudixin®), 4 mg. bendroflumethiazide (Naturetin®), 400 mg. potassium chloride.

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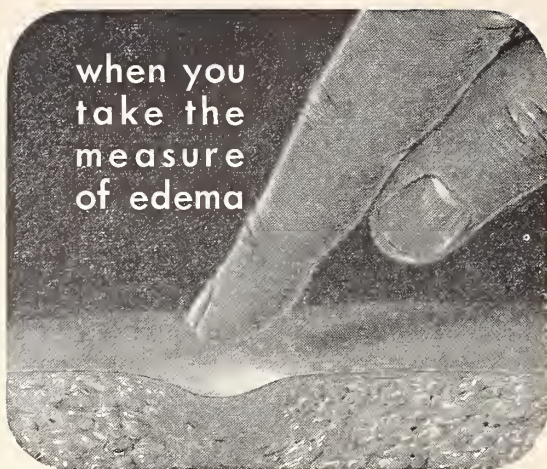
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WARNINGS: Use with caution in the presence of renal disease as azotemia may be precipitated or increased. In patients with advanced hepatic disease, electrolyte imbalance may result in hepatic coma. Dosage of coadministered antihypertensive agents should be reduced by at least 50%. In cases of suspected electrolyte imbalance, serum electrolyte determinations should be performed and imbalance, if any, corrected. Stenosis or ulcer of small intestine have been reported with coated potassium formulas, and surgery has been required and deaths have occurred. Based on surveys of both United States and foreign physicians, incidence of these lesions is low and a causal relationship in man has not been definitely established. Until further experience has been obtained, the use of the drug in pregnant patients should be weighed against possible hazards to the fetus.

CONTRAINDICATIONS: AQUATAG (benzthiazide) is contraindicated in progressive renal disease or dysfunction including increasing oliguria and azotemia. Continued administration of this drug is contraindicated in patients who show no response to its diuretic or antihypertensive properties. Severe hepatic disease is a relative contraindication. (See "Warnings" above.)

PRECAUTIONS AND SIDE EFFECTS: Electrolyte imbalance with hypokalemia (digitalis toxicity may be precipitated), hypochloremic alkalosis and hyponatremia may occur. Patients with cirrhosis should be observed for impending hepatic coma and hypokalemia. Other reactions may include blood dyscrasias, hyperuricemia and gout, nausea, jaundice, anorexia, vomiting, diarrhea, dizziness, paresthesia, photosensitivity and headache.

Hepatic fetor, tremor, confusion and drowsiness are signs of impending pre-coma and coma in patients with cirrhosis. Insulin requirements may be altered in diabetes. AQUATAG (benzthiazide) should be used with caution post-operatively as hypokalemia is not uncommon. Potassium supplementation may be advisable pre- and post-operatively. There have been occasional reports of thrombocytopenia, leukopenia, agranulocytosis, aplastic anemia and precipitation of acute pancreatitis or jaundice.

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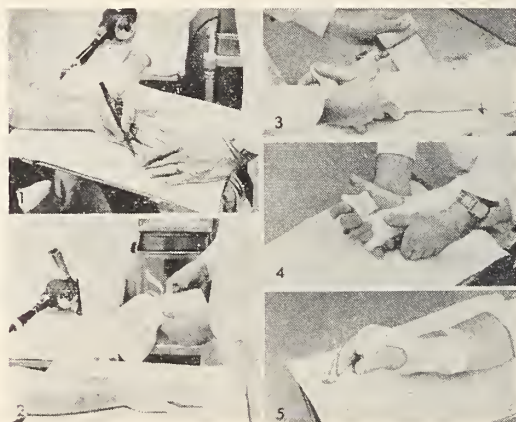
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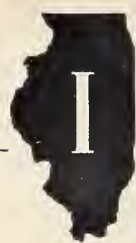


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NEWS and ANNOUNCEMENTS



Nobel Prize Winner Joins Northwestern Faculty

Sir John Eccles, Australian neuro-physiologist who received a 1963 Nobel Prize for research in nerve functions, has been appointed a University Professor at Northwestern University, effective September 1.

In this post, Sir John will use laboratory facilities and personnel of the Northwestern Medical School's department of neurology and psychiatry in basic research on the functions of the cerebellum.

Sir John's major activity in Chicago, however, will be membership in the Institute for Biomedical Research created last year by the American Medical Association. His research there will also deal with the cerebellum. His Institute seminars will be open to Northwestern faculty and advanced students.

U. of I. To Study Continuing Education

A continuing education demonstration center for physicians and other personnel is the long range goal of a contract signed recently by the U.S. Public Health Service's Division of Community Health Service and the University of Illinois College of Medicine. The Center, which is to be developed by the University, will serve as a model for the ultimate establishment of similar centers in other institutions of higher continuing education. Supervisor of the program is Dr. George E. Miller, director of the office of research in medical education and professor of medicine in the College of Medicine at the University's Medical Center Campus in Chicago. Dr. Miller has held this office since its inception in 1959.

The functions of the demonstration center will be to increase knowledge about continuing education practices and to train

persons to conduct effective continuing education programs in medical schools, community hospitals, medical societies, health agencies and other organizations.

When completed the Center will conduct research and demonstration projects on all aspects of continuing education, develop curricula and educational materials, establish criteria for evaluating continuing education activities and serve as a training facility for faculty members.

Physician Volunteers To Serve on S.S. Hope

Dr. Sam L. Miller, Hardin, Illinois, will begin a voluntary tour of service aboard the S.S. HOPE, the famed white hospital ship now on a mission to Nicaragua.

Currently a general practitioner in private practice, Dr. Miller is affiliated with the Body Memorial Hospital in Carrollton, the Jersey Community Hospital in Jerseyville, and the Alton Memorial Hospital in Alton. He received his M.D. degree from the St. Louis University School of Medicine.

Dr. William B. Walsh, President and founder of Project HOPE, said Dr. Miller will be among 27 volunteer U.S. physicians starting on a teaching-treatment tour.

Appointment

Louis C. Johnston, M.D. has been named medical director and director of medical education at Grant Hospital of Chicago.

In his new position Dr. Johnston will organize and maintain the various medical, clinical and educational activities of the staff and of the residents and interns at Grant Hospital. He is also a clinical assistant professor of medicine at the University of Illinois College of Medicine.

Dr. Johnston is a graduate of Northwestern University Medical School and took his internship and residency in Internal Medicine at the University of Illinois Research and Education Hospitals. He is a diplomat of the American Board of Internal Medicine and an associate member of the American College of Physicians. His special sphere of interest is essential hypertension and he has published a number of papers on the cause and treatment of this disease. He has done his clinical research work at the Hypertension Clinic of the University of Illinois.

Appointment

Harry A. Fozzard, M.D., an authority in the field of cardiac electrophysiology, has been named Associate Professor of Medicine at the University of Chicago.

His appointment was announced by Edward H. Levi, Provost of the University.

Since 1962, Dr. Fozzard has been a member of the faculty of the Washington University School of Medicine in St. Louis.

Dr. Hans H. Hecht, Professor and Chairman of the Department of Medicine, said of the new appointment:

"Dr. Fozzard's research on the biophysics of cardiac muscle impulse transmission is of great practical interest in the cardiovascular field. We expect him to play a leading role in electrophysiological research in our Cardiology Section. We also expect to make full use of his great skill as a clinician and teacher."

A native of Jacksonville, Florida, Dr. Fozzard attended Washington and Lee University and Washington University School of Medicine, where he earned the M.D. degree in 1956. He served his internship at Yale University (1956-57) and his residency at Barnes Hospital, Washington University (1959-61). From 1957 to 1959, Dr. Fozzard was a member of the Department of Physiology at the United States Naval Medical Field Research Laboratory, Camp Lejeune, North Carolina.

In 1962, Dr. Fozzard became an Instructor in the Department of Medicine at Washington University School of Medicine, and in 1964 he was made an Assistant Professor of Medicine and Physiology there. He is a member of the Biophysical Society and the American Federation for Clinical Research.

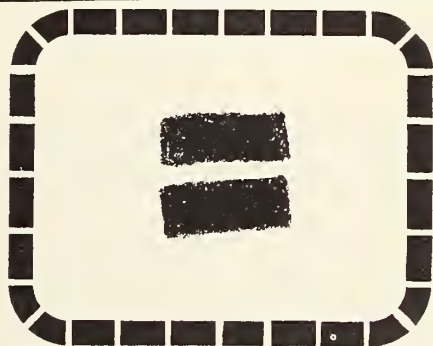
COOK COUNTY Graduate School of Medicine CONTINUING EDUCATION COURSES Starting Dates — 1966

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SPECIALTY REVIEW COURSE IN MEDICINE, Part I, Sept. 12 and 26
SPECIALTY REVIEW COURSE IN PEDIATRICS, September 26
PATHOLOGY REVIEW COURSES FOR SPECIALTIES, Request Dates
PROCTOSCOPY & VARICOSE VEINS, One Week, August 15
SURGERY OF STOMACH & DUODENUM, One Week, September 19
FLUIDS & ELECTROLYTES, One Week, September 12
SURGERY OF FACE, MOUTH & NECK, One Week, September 19
SURGERY OF THE HAND, One Week, September 12
FRACTURES & TRAUMATIC SURGERY, Two Weeks, September 26
GYNECOLOGY, Two Weeks, September 12
ADVANCES IN GYNECOLOGY & OBSTETRICS, One Week, September 26
PEDIATRIC SURGERY, One Week, October 3
ADVANCES IN MEDICINE, One Week, October 3
CLINICAL USES OF RADIOISOTOPES, One Week, October 3
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Meeting Memos



September 5-10—The Third International Congress of Human Genetics will be held at the University of Chicago, sponsored by the American Society of Human Genetics, the Genetic Society of America and the Genetics Section of the International Union of Biological Sciences.

A program of scientific papers, demonstrations, plenary sessions and symposia has been planned for the Congress. In addition there will be a series of social events open to all Congress members and associates. Tours of scientific and general interests are being offered to the participants.

September 11-16—The twelfth annual meeting of the Flying Physicians Association will be held at the Dunes Hotel, Las Vegas. The scientific sessions will be pri-

marily concerned with discussions of the various medical disciplines as they might ultimately relate to general aviation.

September 30-October 1—District 2 of the Illinois State Society of Radiologic Technologists is host at the Society's convention at Stouffer's Oakbrook Inn, Oakbrook, Illinois. Refresher courses for registered technologists and students will make up some of the programs for this convention. A dinner-dance with installation of new officers will conclude the meeting.

October 1-7—The annual Otolaryngologic Assembly of 1966 will be held in the new Illinois Eye and Ear Infirmary at the Medical Center, Chicago. The Department of Otolaryngology of the College of Medicine of the University of Illinois is offering a condensed postgraduate basic and clinical program for practicing otolaryngologists under the direction of Dr. Emmanuel M. Skolnik. It is designed to bring specialists current information in medical and surgical otorhinolaryngology.

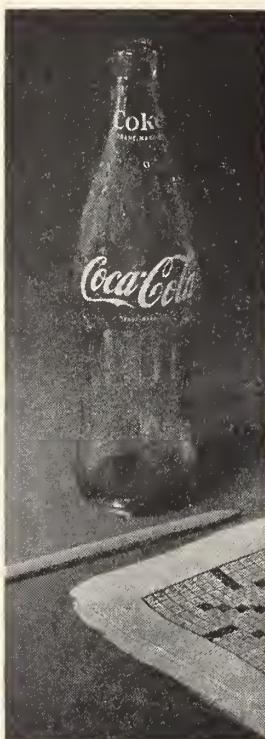
Interested physicians should direct communications to the Department of Otolaryngology, P. O. Box 6998, Chicago, Illinois 60680.



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OBITUARIES

August R. Anderson, Harvey, died July 3, aged 70. A graduate of Northwestern University Medical School in 1927, he was past president and senior staff member of Ingalls Memorial hospital.

P. Keith Andrews*, Florida, formerly of Chicago, died July 19, aged 84. He was a graduate of Bennett Medical College in 1907.

Joseph E. Bellas*, Peoria, died June 22, aged 66. A graduate of Manitoba Faculty of Medicine in 1922, he specialized in general surgery. Doctor Bellas was past president of both North Central Illinois Medical Association and Methodist Hospital staff. He was surgeon and head of the Collins-Bellas Clinic and a member of various surgical societies.

William W. Bolton*, Wilmette, died July 27, aged 65. A graduate of Jefferson Medical College of Philadelphia in 1930, he specialized in dermatology. He later specialized in administrative and occupational medicine. He was medical director of AMA and assistant editor of Today's Health.

Joseph W. Clark, Hinsdale, died June 29, aged 60. A graduate of Northwestern University Medical School in 1932, he specialized in ophthalmology.

Warren T. Creviston*, Princeton, died July 3, aged 63. He was a graduate of St. Louis University School of Medicine in 1927.

Edward F. Czeslawski, Chicago, died July 20, aged 78. A graduate of the University of Illinois College of Medicine in 1910, he had served as past president of Lutheran Deaconess hospital.

Joseph B. Deutsch, Chicago, died June 21, aged 68. A graduate of Medizinische Fakultät der Universität Wien, Vienna, in 1924, he specialized in obstetrics and gynecology.

Howard B. Dillman*, Flora, died June 25, aged 66. A graduate of St. Louis University School of Medicine in 1924, he was chief of staff of Clay County hospital until his retirement last year.

Caroline M. Gentile, Lake Forest, died July 9, aged 65. A graduate of Chicago Medical School in 1926, she was a former staff member of Mother Cabrini hospital.

Cyril L. Hale*, Chicago, died July 5, aged 67. A graduate of Northwestern University Medical School in 1923, he had served on the staff of Martha Washington hospital for the past 25 years.

Norris J. Heckel*, Arizona, formerly of Chicago, died May 27, aged 68. A graduate of Rush Medical College in 1927, he specialized in Urology. He was past president of Chicago Medical Society, the Urologic Society and the American Geriatrics Society.

David J. Jones, Chicago, died July 28, aged 82. A graduate of the University of Illinois College of Medicine in 1911, he specialized in general surgery. He served as city physician for 44 years, supervising the medical care and emergency treatment of city employees.

Ernest F. Lidge*, Libertyville, died July 8, aged 76. He was a graduate of Orvosi Fakultás Tudományegyetem, Budapest, in 1919.

Estelle V. Noe-Lewis, Hammond, died April 12, aged 85. She was a graduate of the Hahnemann Medical College in 1901.

Carl E. Schultz, Sr.*, Hinsdale, died July 18, aged 73. He was a graduate of Rush Medical College in 1919.

Eugene R. Steiger*, Skokie, died July 3, aged 40. A graduate of Stritch School of Medicine in 1952, he specialized in obstetrics, gynecology and public health.

John J. Tingle*, Chicago, died June 9, aged 70. He was a graduate of Loyola University School of Medicine in 1922.

James W. Turner*, Peotone, died July 17, aged 81. He was a graduate of the University of Louisville School of Medicine in 1910. A practicing physician for 55 years, he had served on the staff of St. Mary's hospital for over 50 years. He was a member of the Fifty Year Club of ISMS.

Pat S. Vitullo*, Chicago, died July 4, aged 64. Doctor Vitullo was a graduate of Chicago Medical School in 1945.

Carl H. Weiner*, Chicago, died in May, aged 46. A graduate of Chicago Medical School in 1949, he specialized in pulmonary disease.

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HAZARDS OF RADIATION IN OBSTETRICS AND GYNECOLOGY

Eugene F. Lutterbeck, M.D.* and Irvin F. Hummon, M.D.**/chicago

IN 1963, the State of Illinois passed a radiation protection act. It was the intention of a team of physicians, dentists, physicists, engineers and members of the Department of Agriculture, Commerce and Labor to reflect our present day knowledge of this field in the new state law. It was pointed out that when properly used, ionizing radiation and their sources can be instrumental in improving the health and welfare of the public; and that, if carelessly or excessively employed, they may be detrimental. It was therefore declared to be the public policy of the State of Illinois to encourage the constructive uses of radiation and to prohibit uses which may be detrimental to health. It places the burden and duty upon all, including physicians, to become familiar with these regulations.

* Assistant Professor of Radiology, Northwestern University Medical School. Professor of Radiology, Cook County Graduate School of Medicine.

** Professor of Radiology, Cook County Graduate School of Medicine.

This paper read before DuPage County Medical Society, Hinsdale, Illinois, February 16, 1966.

For that reason, we shall discuss briefly some of the basic principles of ionizing radiation which play such a vital role in obstetrics, and even more in gynecology.

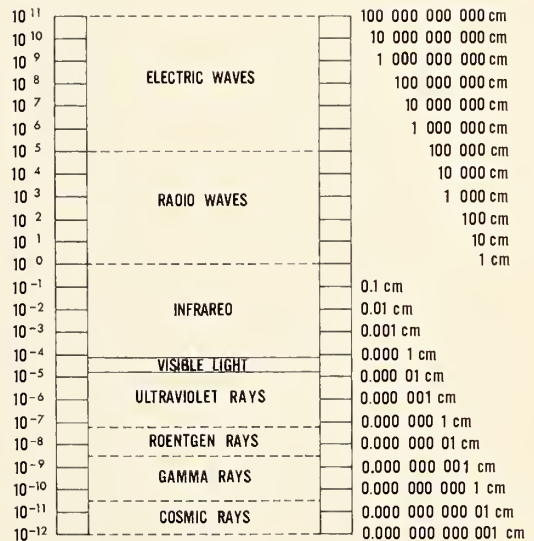


Fig. 1. Spectrum of Electromagnetic Wave Radiations. Wavelength in centimeters. Range of Roentgen Rays 10^{-6} cm. to 10^{-9} cm. Range of Gamma Rays 10^{-9} cm. to 10^{-10} cm.

1. Basic Principles

We are living today in the "Atomic Age" and many are under the impression that it started either with the dropping of the atomic bomb over Japan in 1945 or with the first controlled chain reaction, which was accomplished at the University of Chicago by Fermi and his co-workers in 1942. But the Atomic Age is much older.

The first ionizing rays were discovered in Germany by Roentgen in 1895. These so-called x-rays were able to cause fluorescence, blacken photographic layers, discharge electrical charges, and penetrate wood, metals and flesh, which was entirely unknown to the world before. X-rays, or Roentgen rays, are electro-magnetic waves of a wavelength ranging from 10^{-7} to 10^{-11}

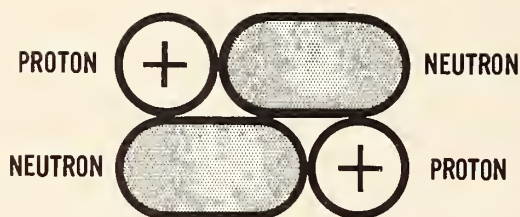


Fig. 2. Alpha Particle. Alpha Rays are corpuscular rays. They consist of 2 protons and 2 neutrons; they have a positive charge. Alpha Rays are helium nuclei.

NEUTRON = PROTON + NEGATIVE ELECTRON

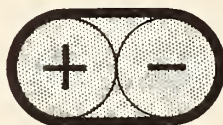


Fig. 3. Neutron. A neutron is considered to consist of a proton and an electron.



NUCLEAR NEGATIVE ELECTRON

Fig. 4. Beta Particle. Beta rays are corpuscular rays. They are negative electrons. They derive from a transformation of a neutron into a proton, ejecting a negative electron from the nucleus.

cm. They are part of a spectrum. The longest waves are electric waves, followed with decreasing wavelength by radio-waves, infrared, visible and ultraviolet light, x-rays, gamma rays, and finally the cosmic rays. They all travel with the speed of light, 186,000 miles per second. The shorter the wavelength, the higher the frequency, ranging from 10^{-1} to 10^{22} p/s.

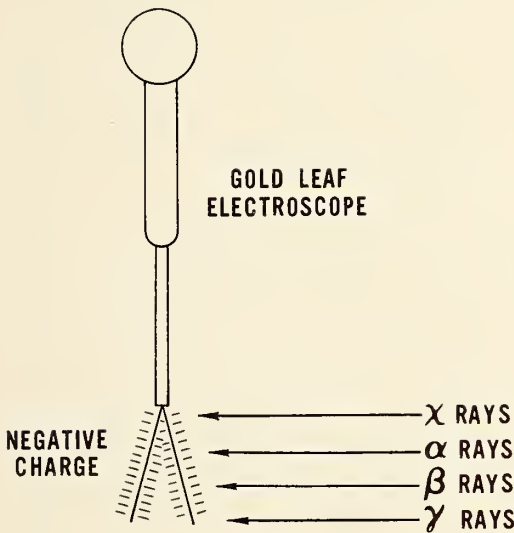


Fig. 5. Ionizing Effect. X-rays, alpha, beta and gamma rays are ionizing rays. All are able to discharge an electrical charge like the one of an electroscope.

The second kind of ionizing rays were discovered in 1896 by the French physicist, Becquerel, the father of natural radioactivity. It was a uranium ore, the Pitchblende from Czechoslovakia, which gave off corpuscular rays having similar properties to x-rays, and it was Becquerel's student, Marie Curie, who later isolated the new element radium out of the ore, which was 2000 times more radioactive than its mother substance.

The third group of ionizing rays were also discovered in France. It was in 1934 when Frederic Joliot and Irene Curie, the daughter of Marie Curie, bombarded aluminum with alpha particles and observed

that neutrons and positively charged particles were emitted from the aluminum during this process. This was the beginning of man-made artificial radioactivity.

X-rays and gamma rays are electromagnetic waves (Fig. 1) and the alpha and beta rays, which are emitted by radium and many other radioactive substances are particles or corpuscular rays (Fig. 2, 3 and

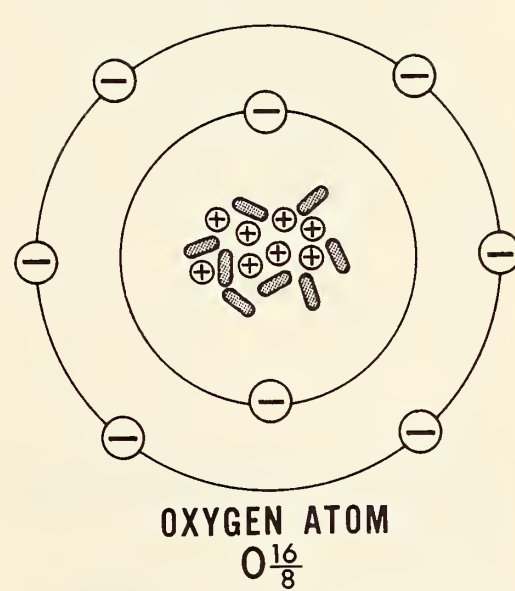


Fig. 6. Oxygen has the atomic number of 8 and the atomic weight of 16. There are 8 electrons in the periphery, 8 protons and 8 neutrons in the nucleus.

4). All four rays mentioned have one thing in common; they are ionizing rays which our state health laws are concerned about. It seems obvious that we have to know a little more about them in order to understand the hazards involved when we use them in medicine, and particularly in obstetrics and gynecology. Our main problem is the measurement of these radiations. The clue is the fact that these ionizing rays are able to discharge an electrical charge (Fig. 5), something that Roentgen described in 1895. It still is the basis of measurement of the quantity of radiation. Ionizing rays are measured in roentgens. Since 1928, at the International Congress of

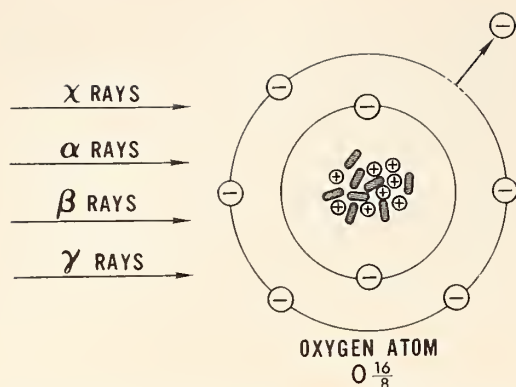


Fig. 7. Ion Pair Formation. Oxygen atom is damaged by ionizing rays. An orbital electron is dislodged, thus forming ion pairs consisting of the remnants of the oxygen atom with a surplus positive charge and the escaped orbital electron with a negative charge.

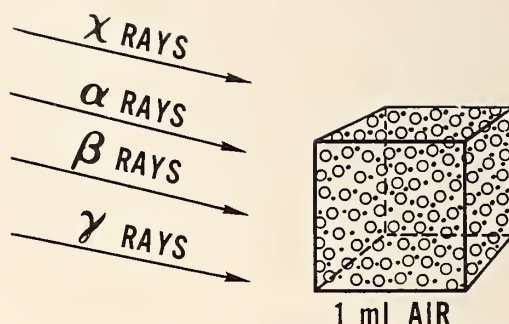


Fig. 8. Definition of a Roentgen, 1 R. If an ionizing ray produces in 1 ml. (1 ccm.) of air under standard conditions 2.083 billion ion pairs a current of 1 electrostatic unit will flow and we speak of 1 Roentgen (1 R.)

Radiology in Stockholm, we defined the Roentgen as that quantity of x-ray or gamma radiation such that the associated corpuscular emission per 0.001293 gram, or 1 ml. of air under standard conditions, produces in air ions carrying 1 electrostatic unit of quantity of electricity of either sign.

This can be explained in a very simple way. Roentgen used a gold leaf electroscope to prove that his x-rays were able to discharge an electrical charge. As mentioned before, we speak of ionizing rays. It means in modern terms that these rays are able to damage atoms. Since 1913, we know that the atom is not the smallest particle of an element. The Danish physicist, Niels Bohr, suggested an atom model with a central nucleus and electrons moving in certain orbits around it. In 1920, with Ernest Rutherford, he modified his own concept of this atom model. The number of positive protons in the nucleus determined the number of electrons in orbits outside the nucleus and thereby the atom's place in the periodic system of elements, of Mendelyev and Meyer of 1869.

We stated that the alpha, beta, gamma and x-rays are ionizing rays, and that they are able to damage an atom. If one considers, for instance, the element Oxygen, which has an atomic number of 8 and an atomic weight of 16, we know that there are 8 protons and 8 neutrons in the nucleus

and 8 electrons in the periphery. An ionizing ray is able to damage such an atom; it can dislodge an orbital electron, thus forming an ion pair, consisting of a negative electron and the remnant of the atom carrying a surplus positive charge (Fig. 6 and 7). If an ionizing ray produces in 1 ml. air 2.083 billion such ion pairs, a small current of one electrostatic unit will flow, and then we speak of one roentgen (Fig. 8). In other words, the roentgen is the unit of exposure dose of x-ray or gamma radiation, but it is also used in connection with corpuscular rays. The alpha rays consist of 2 protons and 2 neutrons; they are nuclei of helium atoms and have a positive charge and the beta rays, which are so widely used in medicine, are negative electrons, which also come from the nucleus through disintegration of a neutron.

Roentgen never suffered any ill effects from radiation. He reasoned that if rays are able to penetrate the body, they must do something to the tissues they pass. He did not know the effect, but he protected himself by shielding his experimental equipment and by staying out of the radiation beam.

It took years to understand the biological effect of ionizing radiations. The first ones were observed by Becquerel, who carried his uranium ore sample in his vest pocket and noticed, to his astonishment a

few weeks later, on his abdomen a red mark, which was a skin erythema. We know today that such reactions are produced by 200 to 1000 R, depending upon the quality of radiation and the field size (Fig. 9). And it was Daniels of Johns Hopkins University who noticed in 1896 that after a long exposure of over 20 minutes to take a skull x-ray to locate a bullet, the hair of the patient fell off after three weeks only to return to normal growth three months later. Today we know that 365 R delivered to the hair follicles will cause such a temporary epilation of the hair (Fig. 10).

Since then we have accumulated an abundance of observations of ionizing radiation reactions to normal and pathological tissues. If you list the normal tissues in a table of decreasing sensitivity, we come to the following order:

1. Leucocytes and lymphocytes, followed by
2. Germinal cells
3. Blood forming organs
4. Squamous cell epithelium
5. Glandular tissue
6. Connective tissue
7. Nerve tissue

If you list the pathological tissues in the same fashion, you will find a great similarity:

1. Leucocytes and lymphocytes, followed by
2. Embryonal tumors
3. Endothelial tumors
4. Epithelial tumors
5. Tumors of glandular origin
6. Sarcoma
7. Melanoma

2. Hazards of Diagnostic Radiation in Obstetrics and Gynecology

In diagnostic roentgenology, a common question asked is, "How dangerous is it to have a chest x-ray taken of a pregnant woman?" What are the facts? With a modern radiographic unit the skin will get about 6 mr. and the gonads 0.3 mr.; 1 mr. is 1/1000 of 1 R. Since we know that the natural background contributes 95 mr. per year to the gonads, 3/10 of a mr. can hardly be of any significance; the same ap-



Fig. 9. Skin Erythema 250 R. Produced with contact roentgen radiation (50 KV, 2 MA, 20 cm. distance, HVL 0.3 cm. AL) on the forearm. Observation 3 weeks post-radiation. Dosages 250 R, 500 R, 750 R, and 1000 R.

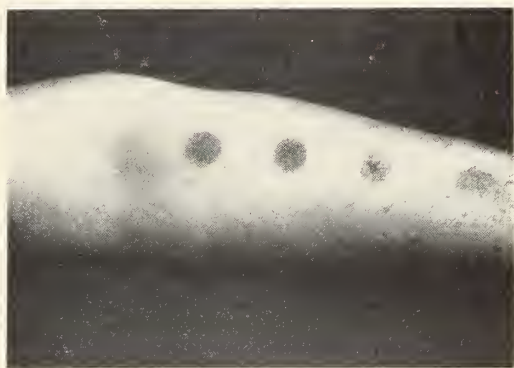


Fig. 10. Epilation of Hair. 365 R to hair follicles. Beginning epilation 2½ weeks post-radiation.

plies to an exposure of 6 mr. to the skin, when it is realized that a person may receive 3000 to 30,000 mr. during a lifetime to the entire body and not only to a limited area.

What about a flat film of the abdomen looking for an anomaly such as an anencephalus, hydrocephalus or a multiple pregnancy? The skin will get about 1000 mr. and the gonads 260 mr. per exposure. The

average dose in a pelvimetry to determine disproportions is about 1500 mr. to the gonads; very similar are the figures for an intravenous pyelogram with about 1820 mr. to the gonads and a salpingogram with about 1000 mr.

Where is the hazard? We know it is insignificant as far as the skin is concerned. What about sterility? It takes 600,000 to 800,000 mr. delivered within 2-3 weeks to sterilize reproductive organs, and it takes 50,000 mr. or more to produce abnormalities in a fetus during the first weeks of pregnancy. And here we are talking of a magnitude of 1800 mr. for an I.V. pyelogram. One should remember that it takes over 1 million mr. or 1000 R to the pelvic region to cause a miscarriage or stillbirth.

All this means that you can assure your patient that with routine x-ray examinations there is no hazard as far as the mother or the fetus is concerned, but we know from practical experience that there are some patients who will never understand, particularly when talking about dosages which have no meaning to them whatsoever.

Somatic changes can therefore be ignored with modern equipment and technique and the genetic hazards should be considered in their real perspective as well. There is no lower level to the amount of radiation which can produce at least *some* order of gene mutations, which, by the way, are by no means caused by ionizing rays alone. There is no escape from the natural sources of radiation which amount to from 3000 to 30,000 mr. during a life span. It is estimated that if you double the dose of radiation to every individual of reproductive age in America, the incidence of defects of genetic origin would increase by 10% in the next generation, roughly from 2 to 2.2%, but it would eventually return to equilibrium. Of the 100 million children born in a generation, there are 2 million now with genetic defects. It would take many generations exposed to doubling dosages to produce 4 million defectives among 100 million live births. It is assumed today that this

doubling dose is about 50,000 mr; in other words, even as far as genetic changes are concerned, the contribution from diagnostic radiation of today is extremely small because few, if any, patients will ever receive during their reproductive years, gonadal dosages in the range of 50,000 mr. or more.

In the literature there are reports that in one instance or another a new technic was developed to reduce the radiation from a radiographic procedure by one-half. One should be aware of the magnitude we seem to be concerned. If the gonadal dose from a chest roentgenogram is decreased from 3/10 to 1½/10 of one milliroentgen the patients' protection has been doubled. But by comparison this would be the same if a bank savings account is increased from 1½/10 to 3/10 of a thousandth of a dollar, one is still extremely poor, even though the increase is 100%.

To avoid excessive hazards of diagnostic radiation, it is essential to comply with our present state rules. These protective requirements in diagnostic roentgenology deal with specifications of equipment in regard to tube housing, collimation, coning, filtration, target distance, screen shielding and protective barriers. A qualified radiation physicist should assist here with individual needs and requirements.

The purpose is that the user should control ionizing radiation in such a way as to provide reasonable assurance that no person will receive an excessive dose of radiation.

The law states that for those working with ionizing radiation, the dose of any calendar year should not exceed 5 R or 5 rem. Rem is the equivalent dose in man, a biological unit, which is, for all practical purposes, equal to 1 R. This means that one is allowed a total of 1/10 of 1 R, or 100 mr. per week. The simplest way to monitor this is the regular wearing of a badge, a service which is available through many companies in the radiation field.

3. Hazards of Therapeutic Radiation in Gynecology

The hazards of radiation therapy in gynecology are somewhat different from the

problems in diagnostic procedures.

Ionizing rays for treatment are used in some benign conditions, but are mostly indicated in malignancies.

The dosages for benign conditions are relatively low. Indications are selected patients with dermatitis, keloids, hemangiomas, condylomas, uncontrollable uterine bleeding and those who may require sterilization because of fibroids, endometriosis or cancer of the breast.

In malignancies, ionizing radiation is widely used, particularly in cancer of the cervix and uterus, malignant tumors of the vulva, vagina and ovaries.

Where are the hazards and where is protection required to comply with our present day state laws?

The external radiation therapy in gynecology for benign diseases is exclusively carried out by radiologists and in some instances by dermatologists. Today we have at our disposal radiation sources, such as Grenz rays, contact roentgen radiation and beta radiation from Strontium 90, which we can safely apply to local areas without running the risk of causing any somatic permanent changes of the skin or underlying tissues, *including the ovaries*. Calculations of air, skin and depth dose are essential. For the protection of personnel, including x-ray technicians and radiation therapists, monitoring is required in order to know that the limits of 100 mr. per week are not exceeded.

The treatment of malignancies in gynecology is, however, a more difficult problem.

Many patients require the combination of internal radiation, surgery and external radiation. One should never lose sight of the fact that the greatest hazard as far as the patient is concerned, is not the use of ionizing radiation, but the cancer itself.

Cell changes of ionizing radiation are proportional to the dose and are caused by energy transfer to living tissues by means of ionization of cell molecules and by their excitation; the moving of an orbital electron from its normal position to an orbit farther from the nucleus.

Since the destruction of a cancer cell re-

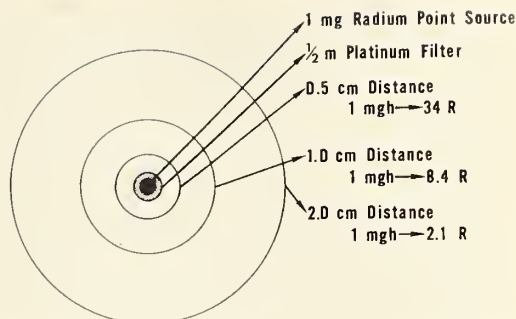


Fig. 11. Relationship Between Milligramhour (MGH) and the Roentgen (R). If one considers 1 mg. of radium as a point source and surrounds it by a wall of $\frac{1}{2}$ m. platinum it will deliver at 0.5 cm. 34 R per hour; at 1 cm. 8.4 R per hour; and at 2 cm. 2.1 R per hour.

quires an average of 6000 rad, or 6 million milliroentgens, it is our aim in modern radiation therapy to deliver that dose to the tumor within 6-7 weeks, without, if possible, causing irreversible damage to the healthy tissue. This is not an easy task. It requires teamwork.

With a malignancy, genetic effects have to be disregarded as far as the patient is concerned, because dosages over 1000 R to the ovaries will produce permanent sterilization. The hazards lie in possible over-radiation of healthy tissues, but even more in the undertreatment of the malignancy, which fails to control the malignant growth and may result in an early loss of the patient.

All radium, cobalt or cesium used in gynecology is in the form of applicators. These applicators have a wall thickness sufficient to absorb all alpha and beta particles, leaving only the gamma rays available for therapeutic use. 1 mg. of radium in an applicator, having a wall thickness of $\frac{1}{2}$ mm. platinum, produces 8.4 R per hour at 1 cm. from such a source, if the volume of radium is small and approaching that of a point (Fig. 11). Dosages from radium and other gamma emitters should be expressed in R whenever possible.

In addition to calculations, there are a number of instruments available today to measure various radiation levels at different areas of interest, such as the Gamma Meter. The small cadmium sulphate crystal cell can be easily inserted into the blad-

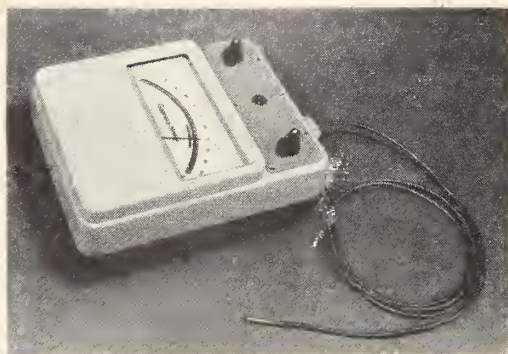


Fig. 12. Siemens Gamma Meter to measure gamma roentgens of needles, tubes and seeds per hour. Note small cadmium sulphate probe at end of cable which can easily be inserted into the bladder and rectum for gynecological patients.

der and rectum and the amount of gamma radiation per hour can be read without difficulty (Fig. 12). It has been our experience that with the use of the Ernst applicator (Fig. 13) in the treatment of carcinoma of the cervix, the total dose (including external radiation) to the cervical os should never exceed 20,000 R; to point A (2 cm. above and 2 cm. lateral of the cervical os) 8,000 R; and to point B (2 cm. above and 5 cm. lateral of the cervical os) 5,000 R. The upper limit of 5,000 R applies also to the entire pelvis, including the bladder and rectum. There are some who use external radiation alone and feel that they can safely deliver 6,000 R with supervoltage to the entire lower pelvis; however, we believe this carries the risk of late and irreversible somatic changes of the mucous membranes of the lower abdomen, including the intestine, bladder and rectum.

All this means that whether radium, cobalt, radon seeds or other radioactive substances for the internal treatment of a gynecological malignancy are used, one should be able to tell how many R were delivered to the tumor, to the bladder, rectum and to the various points of the lower pelvis, because otherwise a radiologist will be unable to treat the patient with external radiation adequately, be it with conventional or supervoltage sources of cobalt, cesium or others.

In order to accomplish this goal, teamwork between a surgeon, gynecologist and

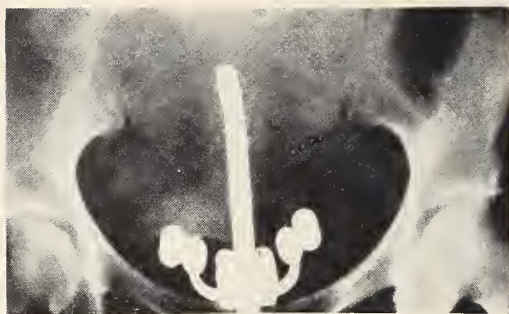


Fig. 13. Complete Ernst Applicator Inserted Into Vagina, Cervical Canal and Uterus.

Maximum total dose to cervical os	20,000 R
Maximum total dose to Point A	8,000 R
Maximum total dose to Point C (includes external radiation)	5,000 R

radiologist in the operating room is essential. This is of particular importance in carrying out protection rules in the operating room.

How can one operate without getting more than 100 mr. per week? Some ask why not wear a lead apron. The half value layer (HVL) of radium is 1 cm. lead, which means that 100 mg. of radium surrounded by 1 cm. of lead will still be the same as 50 mg. unprotected. Nobody can wear aprons or gloves of that thickness. The only way to stay within the limits required is by keeping a distance from the radioactive source and by speed of operation. The state law requires that the hands should not get more than 18.75 rem. per quarter year. If one touches a 100 mg. source for more than a few minutes, such as in packing, the limit may have been reached at that time. We want to avoid permanent changes on fingers, loss of hands and eventually life as it has happened with many of the early pioneers in radiology. In the operating room, the gamma sources of radium and cobalt should be as far away as possible from the operating table and should be surrounded by lead bricks of a thickness of at least 4 inches. The sources have to be sterilized by cold sterilization methods. The reason is that it takes over 100,000 R to destroy bacteria.

Written instructions for the nursing personnel should contain the amount of radioactive material in mc. or mg. which has

been placed into a body cavity or tissue, and the amount of mr. present over the radioactive material at the surface of the skin, which can be measured easily with a survey meter. (Fig. 14)

Depending upon these measurements, specific instructions in regard to patients in the next bed or adjoining room should be posted for the hospital stay. The same applies to nurses and visitors.

The nurses taking care of these patients should be monitored. They then will realize that the patient may receive the usual nursing care, such as bathing, feeding, medication, and bed pan without hazard to them.

If gamma sources of radium or cobalt have to be removed, they should be placed immediately into a lead container. To clean the radioactive applicator it is best to use fresh peroxide for a few hours.

In order to keep the exposure to an individual as low as possible, it is also important that these lead containers with the radioactive materials be transported in the hospital in wagons with long handles and not carried.

4. Conclusion

Teamwork between surgeons, gynecolo-



Fig. 14. Survey Meter. Survey meter (range from 1-15, 150 and 1500 mr/h) for determination of safe distance from a patient.

gists, obstetricians and radiologists can avoid all significant hazards of constructive uses of ionizing radiation in obstetrics and gynecology. It is our duty as physicians to familiarize ourselves with dosage problems and inform nursing personnel and patients of the real aspects of radiation hazards.

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SURGICAL GRAND ROUNDS

This case report was part of Surgical Grand Rounds held at Chicago Wesley Memorial Hospital on March 26, 1966.

CASE PRESENTATION

Pulsating Tumors of the Sternum

Dr. Ann Middleton: A 54-year-old woman was in good health until September 1963 at which time she first noticed a painful mass in the lower third of her sternum. A biopsy was done at another hospital and was reported not to show evidence of tuberculosis or carcinoma. The patient was treated with adrenocortical steroids and discharged.

She was admitted to Chicago Wesley Memorial Hospital in October 1963 for evaluation of this mass. Biopsy of the sternal mass revealed a moderately well differentiated carcinoma of the clear-cell type. In spite of numerous laboratory tests and X-ray studies, a primary source was not found. An intravenous pyelogram, cystoscopy and retrograde studies were all normal at that time.

The patient was admitted again in October 1965 because of progressive increase in the size of the mass. A nephrotomogram at this time demonstrated a mass in the right kidney. On November 2, 1965 a right nephrectomy was performed, and the kidney contained moderately well differentiated adenocarcinoma of the clear-cell type. The tumor extended into the renal pelvis and the renal vein. In February 1966 the patient was re-admitted with complaints again of an increase in size of the sternal mass. The tumor measured 9x6 cm. and was a firm, fixed, pulsatile mass in the distal 1/3 of the sternum. Lamino-grams of the sternum were taken and demonstrated that the tumor was confined to the body of the sternum. On February 17, 1966 the body of the sternum was excised and was replaced with stainless steel mesh. The post-operative course was complicated by a partial pneumo-thorax and bilateral recurrent pleural effusions. The patient was discharged on the 30th post-operative day.

Dr. Abram Cannon: Above the angle of Louis the sternum appears to be normal, but inferiorly there is extensive destruction



FIGURE 1. Destruction of body of sternum by tumor mass is shown on lateral view.

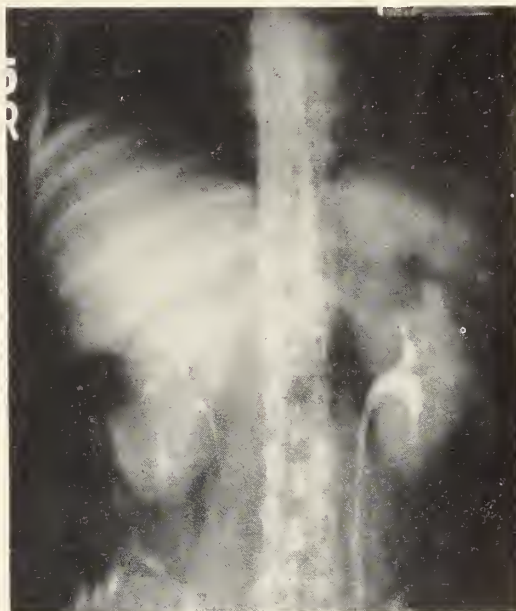


FIGURE 2. Nephrotomogram demonstrates abnormality of right renal pelvis.

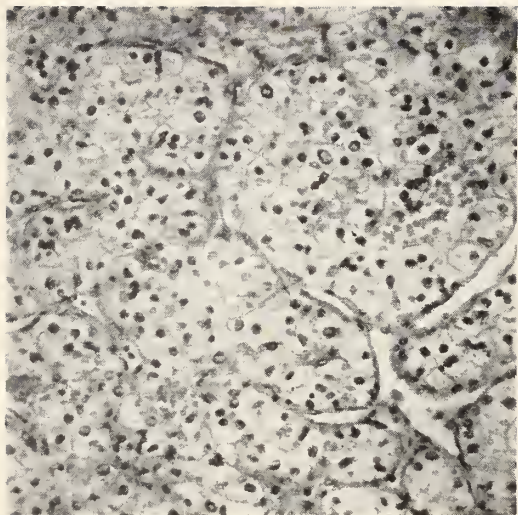


FIGURE 3. The histologic study of the sternal tumor is consistent with metastatic clear-cell carcinoma.

of the sternum (Fig. 1). Films made at the time of the laminographic study in October show that the inferior sternum is entirely destroyed. The initial urographic study was interpreted as being entirely normal although visualization of the kidney was not entirely satisfactory. Subsequent nephrotomograms (Fig. 2) demonstrated indentation of the right kidney pelvis and suggests that there is a rounded mass in that area. A retrograde pyelogram with an oblique view showed considerable distortion of the calyceal system, and confirmed the presence of a mass in the right kidney.

Dr. Frank Caronc: Microscopic sections of the mass in the sternum show cartilage, a little bone and much tumor tissue. The sternum was almost completely replaced by tumor which was quite vascular in some areas. Large sheets and clusters of cells which have rather small dark nuclei and an abundant amount of clear cytoplasm were found which is consistent with metastatic clear-cell carcinoma from the kidney (Fig. 3).

Dr. Middleton: The second case is that of a 66-year-old man who was first admitted to Wesley Hospital in 1950 for excision of a thyroid adenoma. Just prior to admission he had noticed a sudden increase

in size of his goiter. A subtotal thyroid lobectomy was performed, and the pathological diagnosis at that time was a Hurtle-cell adenoma. During the period from 1950 to 1960 the patient had six operative procedures for excision of recurrent tumor, which included a radical neck dissection and a laryngectomy. In June 1965 the patient was admitted to evaluate a tumor over his sternum which was noted to have increased in size. On admission the tumor measured 6x7 cm. It was fixed, firm and pulsatile, and located at the manubriosternal junction. Angiograms demonstrated that the tumor was supplied by the internal mammary vessels. On June 15, 1965 a thoracotomy was performed. The mass was found to be fixed to the aorta and superior vena cava. The internal mammary vessels were ligated. Post-operatively the patient was treated with cobalt radiation.

Dr. Cannon: Films made in June show evidence of a rather large mass at the upper end of the sternum. We had trouble showing this mass to really good advantage,

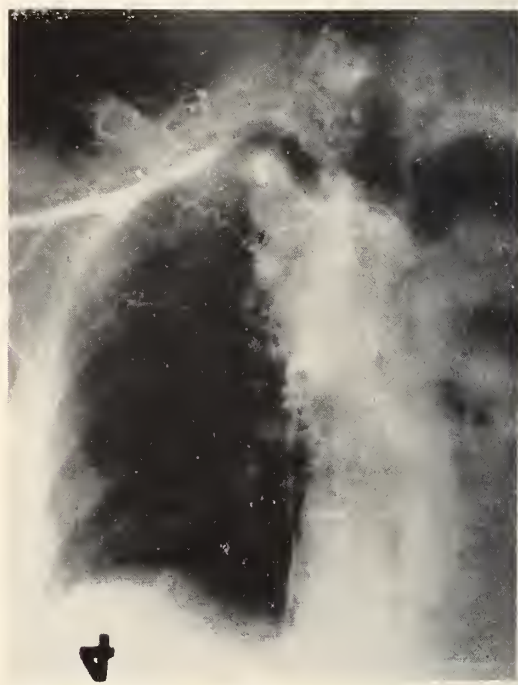


FIGURE 4. The vascularity of the tumor mass in the sternum was demonstrated by right brachial angiogram.

but a laminogram shows that at least the medial end of the clavicles are preserved and there is a loss of the sternal tissue in that region.

The angiogram was rather interesting. The right brachial angiogram filled the subclavian artery, a large internal mammary artery, the innominate artery and the arch of the aorta, and demonstrated vascularity of this tumor mass (Fig. 4). A subsequent film showed this vascularity even more markedly.

Dr. Theodore Hudson: A biopsy was performed in the first patient. A curette was used to obtain tissue and was associated with severe bleeding which required 4 units of blood. On the basis of my experience with the biopsy, I was determined to control the blood supply when the sternum and tumor were removed. We transected the sternum with a transverse incision at the second intercostal space exposing both internal mammary vessels; which were ligated. Thereafter the operation was relatively bloodless. The defect was obliterated with stainless steel mesh. Particular care was taken to secure the mesh so that it would not migrate into the pleural space.

A biopsy was not obtained in the second patient. The angiogram had demonstrated the vascularity of the tumor. We approached this lesion through a posterior thoracotomy. The plan was that if it was operable we would close the posterior incision, turn the patient over and remove the sternum. We found that the lesion was not operable and because of the angiogram I ligated the right internal mammary at its origin from the subclavian. This had satisfactory effect on the tumor. The bruit stopped and did not recur. The tumor decreased in size over the succeeding months. Whether or not this was secondary to irradiation or to the ligation of the internal mammary is difficult to say. Pulsating sternal tumors are interesting and are uncommon. In 1947 Kinsella reported 2 non-pulsatile primary tumors of the sternum and reviewed the literature, including pulsatile tumors. The metastatic lesions are all from the kidney. Another

report appeared in the Diseases of the Chest in 1964 of a pulsatile tumor of the sternum. Biopsy showed clear-cell carcinoma, presumably renal in origin. Of the 26 pulsatile tumors of the sternum that I could find in an intensive though not exhaustive review of the literature, plus the two reported here, all were due to metastatic deposits of tumor except for one. Approximately 60 percent were metastatic from the kidney and 40 percent were metastatic from the thyroid. Thus, one may conclude, that if a pulsatile tumor of the sternum is not caused by an aortic aneurysm, it is almost certainly metastatic from either thyroid or kidney. In about 90 percent of the persons with a pulsatile tumor of the sternum secondary to thyroid cancer, a tumor is present in the neck. Therefore, if a pulsatile tumor of the sternum is present which is not an aortic aneurysm and a mass is not present in the neck, the sternal tumor is almost certain to be of renal origin.

Dr. John Beal: I am interested in Dr. John Grayhack's opinion concerning the difficulty in demonstration of the renal lesion in the first case. Even though a clear-cell carcinoma was found by biopsy of the sternum, the pyelogram was considered normal and the patient was asymptomatic.

Dr. John Grayhack: It is not uncommon for carcinoma of the kidney to be either (1) asymptomatic in its primary location, or (2) difficult to demonstrate although known to be present. When a renal neoplasm is suspected but not detected by conventional pyelograms, we now utilize nephrotomography and aortography to demonstrate the primary lesion. With regard to the spontaneous regression or total disappearance of metastatic carcinoma of the kidney after removal of the primary neoplasm—there have been a number of recent reviews. Whether regression is spontaneous, that is, by change or produced by removal of the primary tumor is difficult to determine with certainty. I think that the patient who was reported today has a poor prognosis. Although metastatic lesions from carcinoma of the kidney seem to be

solitary at times, general long term follow-up studies demonstrate that most patients have other lesions.

Dr. Cannon: We have been rather impressed in our department that patients who have apparent solitary bone metastases

have a high incidence of carcinoma of the kidney. A favorite site is the proximal end of the femur down in the intertrochanteric area. When an adult is found to have a solitary bone lesion that is a little puzzling, a urogram is indicated.

**MATERNAL WELFARE COMMITTEE
REQUESTS CASE HISTORIES FOR ABORTION STUDY**

The 1966 House of Delegates of ISMS held up action on a recommendation to modernize the abortion laws in the state until the Maternal Welfare Committee can obtain more information on the subject.

The Committee would like to have reports of where significant physical or emotional damage resulted to any mother or infant as a result of a situation which could have been prevented by a

therapeutic abortion, and where such therapeutic abortion was incapable of being performed due to the structure of the present law.

Details of such cases should be sent to the physician's representative on the Maternal Welfare Committee directly or through the district trustee.

Maternal Welfare Committee members and the counties they serve are:

DISTRICT AND MEMBERS

- 1. William R. Larson, M.D., 13707 W. Jackson, Woodstock, Illinois 60098
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TUBAL PREGNANCY: A REVIEW OF 91 CASES

Thomas W. McElin, M.S., M.D., and Donald M. Sherline, M.D./Evanston

AWARENESS OF THE POSSIBILITY of pregnancy and pregnancy complications in the wed or unwed patient, within the limits of the reproductive years and with or without a history of amenorrhea, is the most important facet in the diagnosis of ectopic gestation.

The problem of ectopic pregnancy is not decreasing, but, contrariwise, is increasing, with a present incidence of 1:120 pregnancies in the non-white population and 1:200 pregnancies in Caucasian pregnancies. At Evanston Hospital the incidence is 1:235 live births.¹ Bobrow and Bell² report an incidence as high as 1:64 live births and a mortality rate of 1.4 percent. In two prior studies from Evanston Hospital, Grier³ (1937) reported three deaths in one hundred cases, and Danforth⁴ (1947) reported one death in 74 cases of ectopic pregnancy. Malkasian et al⁵ reported that 2.2 percent of maternal deaths in Minnesota during 1935-1954 were due to ectopic pregnancies. Ectopic pregnancy, therefore, is neither rare nor innocuous.

It, obviously, is the policy in most cen-

ters today to rely increasingly on clinical diagnostic adjuncts—culdocentesis, culpotomy, culdoscopy, curettage, and pregnancy testing—to make the diagnosis of ectopic pregnancy. We submit, however, that in the majority of cases, the diagnosis is provided by the history and physical examination. The associated diagnostic tests should remain adjuncts to confirm the diagnosis, not make it.

Details of Present Study

The present study is a comprehensive review of 91 consecutive cases of tubal pregnancy treated by 15 different members of the Obstetrical and Gynecological Service of Evanston Hospital from January 1, 1950 to January 1, 1964. This small, consecutive series is of interest because, in the majority of cases, the diagnosis was made from the history and physical examination. Associated diagnostic aids were rather sparingly utilized (Table IV). Only 29 of the 91 patients had operative diagnostic procedures performed upon them. Dilatation and curettage was occasionally

TABLE I

Incidence of Prior Abdominal Surgery	
DeAlvarez and Nisco ⁷	14.1%
Bobrow and Bell ²	12.9%
Sandmire and Randall ⁸	42.0%
Present Study	35.0%

utilized in this series if the external bleeding was unusually heavy and the operator wished to assure himself that a residual problem (vaginal hemorrhage from some other cause) would not remain. There were no deaths among the 91 patients.

The ages of our patients ranged from 18 to 48 years, with a mean of 29 years. Seventy-six patients were Caucasian; 15, Negro. Fifty-three patients had prior vaginal deliveries; five had prior ectopic pregnancies. The longest interval either from the last pregnancy or date of marriage, if there had been no prior pregnancies, ranged from one month to 13 years. There was no significant seasonal variation.

Three of our patients had known pelvic inflammatory disease prior to this gestation, but two of these patients also had had prior abdominal surgery. We found this latter parameter to be one of the most common denominators in our series; 35 percent of our patients had experienced prior abdominal surgery (Table I).

Acute and Subacute Groups

There were two separate populations in our series in regard to the onset and duration of symptoms—an acute and a subacute or chronic group. We arbitrarily divided this population at 24 hours, the low point of the curve, and observed that 27 percent of our patients had had symptoms less than 24 hours. Within this group, the mean duration of symptoms was five hours. The subacute group accounted for 73 percent of the patients. The mean symptom duration in this group was 11 days, and the longest duration of symptoms was one month.

Abdominal pain is *the* most common symptom of ectopic pregnancy—a symptom which varies so greatly in timing, pre-

TABLE II

Symptoms	
Bleeding	85%
Nausea	36%
Faintness or Syncope	34%
Rectal pressure or change in bowel habit	34%
Shoulder pain	24%
Vomiting	24%

cise location, and intensity as to be almost impossible to categorize, the next most common symptom is vaginal bleeding. Eighty-six percent of our patients had vaginal bleeding of some sort. Most patients started with persistent spotting and then had a heavier flow, but recurrent episodes of spotting were quite common. A history of amenorrhea, although important, is not invariably present. Table II is a tabulation of symptoms other than abdominal pain, with their occurrence rates.

More Symptoms

Sixty-two percent of our patients had either abdominal rigidity, rebound tenderness, or guarding. Fifty-four percent had pain upon movement of the cervix during pelvic examination. Sixty-nine percent of the patients had an adnexal mass or a sense of "fullness" on vaginal examination. Many uteri either could not be palpated or uterine size could not be determined, but of the uteri that could be palpated, 46 were felt clinically to be enlarged to some degree.

The mean systolic blood pressure on admission or in the Emergency Room was 96 mm. Hg. The range of the admission systolic pressure was 144-0 mm. Hg. The clinical estimation of blood loss ranged from 100 cc's to 3500 cc's in a patient with associated chemical burns of the vagina and cervix.⁶ The estimated mean blood loss was 750 cc's. Fifty-six patients received blood replacement (Table III).

At laparotomy, it was noted that 45 percent of the involved tubes were intact and 55 percent were ruptured. Cornual implantation occurred in two cases. Analysis of the precise location of the ectopic

pregnancy within the tube revealed percentages similar to other published series. Twenty percent of the contralateral tubes or ovaries were grossly abnormal in some respect.

Table IV lists the operative procedures performed. In 86 cases of either complete or partial tubal excision, 45 were right-sided and 41, left-sided. Grier³ espoused cornual wedge resection in his early report from Evanston Hospital, and W. C. Danforth,⁴ in 1947, favored simple complete salpingectomy. Cornual resection was not utilized in the present series, except in the two instances of cornual implantation.

Post-operative Procedures

Postoperative complications in this series were infrequent and, fortunately, unimportant. Forty-eight percent of the patients did not receive any antibiotics. Twenty-two patients prophylactically received a streptomycin-penicillin combination. Postoperative hematocrit determinations ranged from 24 to 47 percent, with a mean of 38 percent, and the mean postoperative leukocyte count was 9,400.

Accurate determination of subsequent pregnancy was difficult. Our records disclosed, however, that 29 patients, or 32 percent of the patients in our study, had subsequent admissions at Evanston Hospital for term pregnancies. The true value for subsequent successful pregnancy is, presumably, slightly higher. Two patients

TABLE III

Blood Replacement	
<i>Preoperative</i>	9 Patients
Min.	500 cc's
Max.	2000 cc's
Mean	687 cc's
<i>Operative</i>	53 Patients
Min.	500 cc's
Max.	1500 cc's
Mean	811 cc's
<i>Postoperative</i>	3 Patients
Min.	500 cc's
Max.	1500 cc's
Mean	568 cc's

(3%) had subsequent ectopic pregnancies (Table V).

Considering the time periods and the number of deliveries involved, we recognize a diminishing incidence of ectopic gestation in our practice. This is at variance with most published reports of the last two decades involving far larger series.

Comment

Ancillary procedures, i.e., culpotomy, culdocentesis, pregnancy testing and dilatation and curettage, *may* be helpful in doubtful cases. However, a penetrating history should establish most of the diagnoses of tubal gestation, and a complete gynecologic examination should substantiate most of the remaining ectopic diagnoses. Only in relatively few cases are culdocentesis and the like needed except as confirmatory procedures.

Once a diagnosis is made, definitive therapy, i.e., surgery, should be undertaken. There is no harm in observing the patient with an acute abdominal emergency while diagnostic procedures are being completed, as long as the patient's condition is stable

TABLE IV

Operative Procedures	
<i>Diagnostic</i>	
Culdocentesis	10
Culpotomy	8
D and C	19
<i>Therapeutic</i>	
Complete tubal excision	71
Partial tubal excision	14
Tube not removed (Tubal Abortion)	8
<i>Incidental</i>	
Oophorectomy	20
Ovarian Cystotomy	1
Ovarian Cystectomy	2
Partial excision of involved ovary	1
Salpingostomy	4
Partial Salpingectomy, contralateral side	3
Myomectomy	2
Hysterectomy	4
Appendectomy	7
Lysis of adhesions, peritoneal	6
Repair of urinary bladder	1

TABLE V

Subsequent Pregnancies with Viable Infants	
Source	Percent
Abrams and Farrell ⁹	37
McElin ¹	25*
Skulj ¹⁰	19
Present Study	32

*Composite value collected from review of literature.

or improving. However, even slight deterioration in the patient's condition calls for laparotomy, preferably under cyclopropane anesthesia. Spinal anesthesia is contraindicated in the patient on the verge of shock or in shock. If Pentothal is selected as an anesthetic agent, it must be used sparingly. In those circumstances where an anesthesiologist is not available, local infiltration must be considered the anesthesia of choice.

The 35 percent incidence of prior abdominal surgery in this series strengthens our attitude regarding elective or incidental procedures performed at the time of surgical therapy for tubal gestation. We, as the two authors who previously reported from Evanston Hospital, do not approve of simultaneous incidental procedures at the time of tubal surgery. Gentle removal of clots and free blood from the peritoneal cavity is indicated, as are those surgical procedures deemed necessary to restore the pelvis to normalcy. Elective appendectomy and myomectomy of the small subserous myoma at the time of tubal surgery are mentioned only to be condemned.

Postoperatively, tubal insufflation with a solution of hydrocortisone and penicillin should be performed to reduce the inflammatory response in the tube and thus decrease the possibility of tubal narrowing. Following hospital dismissal, routine tubal insufflation should be carried out at monthly intervals until such time as pregnancy ensues or the obstetrician feels that the initial inflammatory and subsequent healing processes are accomplished.

Summary

- (1) Ninety-one consecutive instances of ectopic gestation have been reviewed

in terms of their vital statistics, symptoms, signs, treatment, and outcome.

- (2) The awareness that pregnancy and/or a complication of pregnancy exists is a critical necessity for making the diagnosis of ectopic pregnancy.
- (3) We acknowledge the confirmatory value of the various diagnostic maneuvers (particularly culpotomy), but believe that emphasis on their secondary role is important.

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SARCOIDOSIS OF THE HEART ASSOCIATED WITH MYOCARDITIS: REPORT OF CASE

Bernard Peison, M.D./chicago

GENERALIZED SARCOIDOSIS has been found with increasing frequency to be a cause of heart disease, in which death can be attributed solely to the existence of the cardiac lesions.¹ A prominent feature in many of such cases has been the sudden death of the individual, which is attributed to the mechanical interference of the conduction system by the non-caseating sarcoid granulomas.²

Recently an occasion presented to study a fatal case of disseminated sarcoidosis with cardiac involvement where the patient died suddenly. An interstitial myocarditis was present associated with the heart involvement by the sarcoid nodules. Recent investigations have not as yet disclosed a specific etiologic agent responsible for the formation of sarcoid granulomas. The presence of a myocarditis may bring support to an infective agent, and explain more easily the sudden death of patients whenever it cannot be attributed only to abnormalities of the conduction system. In reviewing the recent literature, no previous report has been found of the association of myocarditis and cardiac sarcoidosis.

Report of Case

A thirty-year-old colored woman was admitted to the Emergency Room of Mercy

Hospital in a shock-like state with marked respiratory difficulty.

For the past three years the patient attended Cook County and Mercy Clinics because of progressive shortness of breath, two pillow orthopnea, a non-productive cough, and weight loss. In 1962 she was admitted to another hospital at which time a chest film showed extensive fibrosis with a honeycomb appearance at both apices. Positive physical findings included a systolic apical murmur, tachycardia and crepitant rales at both lung bases. A bronchoscopy and scalene node biopsy were negative. Physical examination showed an asthenic, chronically ill woman with cold, clammy skin, cloudy sensorium, a non-obtainable blood pressure and a thready rapid pulse of 140 beats per minute. There was a pre-systolic gallop rhythm and tachycardia. The pulmonic second sound was accentuated. The lungs revealed supraventricular retractions with fine moist rales at the right base. The abdomen and extremities were normal.

Laboratory data revealed a hematocrit of 43%, hemoglobin 13.4 grams, RBC 6.68 and WBC 5,650 with a normal differential. A portable chest film showed no significant changes in the appearance of the extensive fibrosis throughout both lung fields. An electrocardiogram showed sinus tachycardia and a first degree atrio-ventricular block. The clinical impression was that of acute

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Figure 1: Cut surface of spleen showing the parenchyma replaced by sarcoid granulomas.

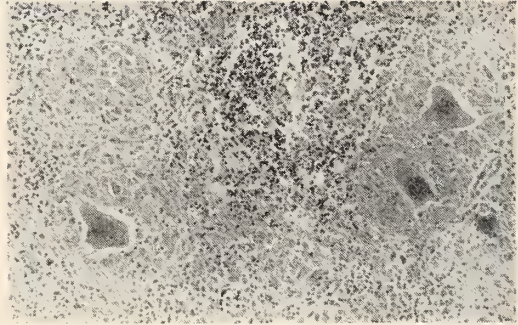


Figure 2: Non-caseating sarcoid granuloma replacing lymph node (H. & E. $\times 150$).

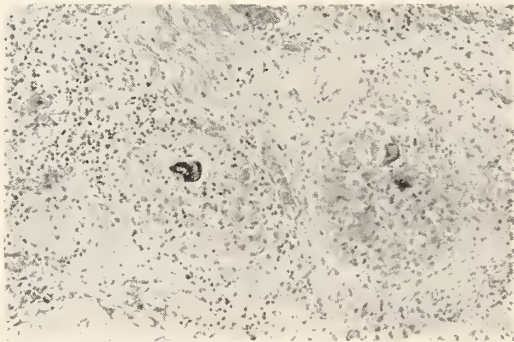


Figure 3: Schaumann's body lying within epithelioid sarcoid granuloma (H. & E. $\times 150$).

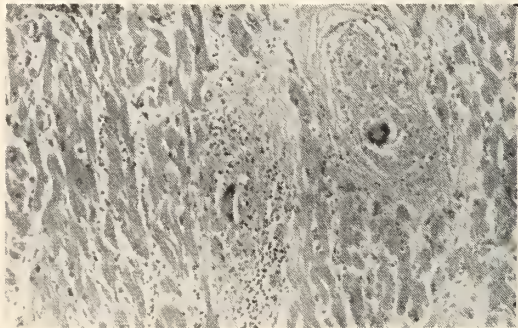


Figure 4: Sarcoid granulomas infiltrating myocardium (H. & E. $\times 150$).

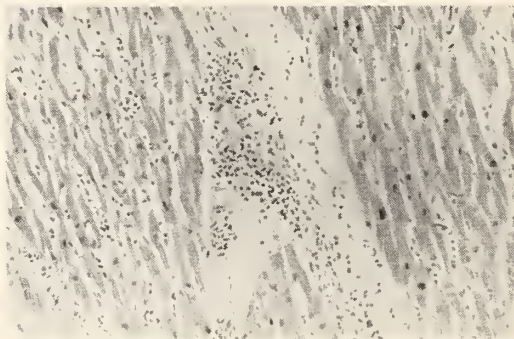


Figure 5: Myocardium infiltrated by foci of acute inflammatory cells (H. & E. $\times 150$).

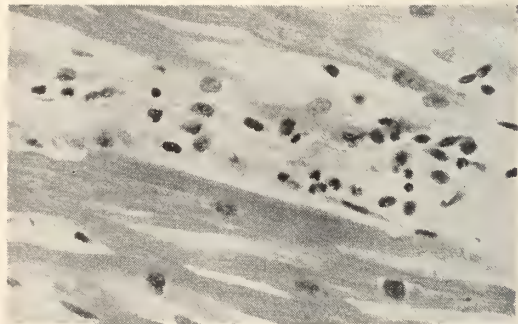


Figure 6: Higher magnification of inflammatory cells of Figure 5. Note the presence of polys (H. & E. $\times 575$).

myocardial failure secondary to a primary cardiopathy or myocarditis. The patient was rapidly given lanatoside C. Her status improved only slightly and she died twenty-eight hours following admission.

Pathology

At autopsy the major gross pathological findings were confined to the lungs, heart, lymph nodes and spleen. Both lungs were of increased weight and consistency. The right lung weighed 770 grams and the left 710 grams. On section the lower lobes were almost completely airless with a grayish red homogenous appearance. The upper lobes showed marked compensatory bullous emphysema and bronchiectasis with a honey-comb appearance. The heart weighed 350 grams and showed dilatation and hypertrophy of the right chambers. The myocardium was reddish-brown and of soft consistency. The spleen was enlarged and weighed 400 grams. The surface was studded by multiple slightly poorly outlined nodules ranging in size between 0.5 and 2 cms. and completely obscuring the normal splenic parenchyma (Figure 1). The lymph nodes were generally enlarged up to a diameter of 3.5 cms. The cut surface was slightly firm and gray.

Microscopic examination revealed the lungs, spleen and lymph nodes to be massively replaced by non-caseating epithelioid granulomas, containing numerous multinucleated giant cells of Langhan's type and a peripheral rim of lymphocytes (Figure 2). Asteroid bodies were not identified, although Schaumann's bodies were seen frequently lying free in the tissues near the granulomata and within multinucleated giant cells (Figure 3). Sarcoid tubercles were present in the liver, kidneys and myocardium in lesser number (Figure 4). The heart showed in addition foci infiltrated by acute inflammatory cells, predominantly eosinophilic leukocytes and mononuclear cells (Figures 5 and 6). The apices of both lungs showed compensatory bronchiectasis and acinar emphysema. Culture and stain for tubercle bacilli were negative.

Comment

Sarcoidosis has been described as a dis-

tinct type of tuberculosis caused by acid fast bacilli not yet identified, as a disease characterized by the interaction of antigen-antibody, as a systemic tumor of multicentric origin; and as the product of pine pollen or of an unknown virus. The best supported opinion is that the etiology remains unknown. The individual lesion of sarcoidosis is a non-caseating epithelioid granuloma the size of a miliary tubercle. In contrast with tuberculosis, caseation is not part of the pathognomonic picture of sarcoidosis, although minute central foci of caseation are found not infrequently, provided many different foci are examined in many sections. Inclusion bodies have been described but they are not pathognomonic.

There is no precise knowledge of the incidence of sarcoidosis in the general population. The highest prevalence rate observed in a recent international survey was reported to be in Sweden with 64 per 100,000 based on radiographic study of approximately two million persons.³

Since myocardial sarcoidosis was described in 1929, there have been reported some 33 cases in which death was attributed directly to the cardiac lesion.¹ In over 50% of these cases death was sudden^{1,7,8,9} and often the existence of the myocardial lesions has not been suspected clinically. The occurrence of myocardial involvement in sarcoidosis has been estimated from autopsy material to be 40%.⁴

The manifestations of sarcoid lesions of the heart include disturbed conduction, arrhythmias and congestive heart failure or a combination of these.² Atrio-ventricular dissociation is the most frequently encountered conduction disturbance and is the abnormality most often associated with sudden death. Arrhythmias are the second most common clinical manifestation and are paroxysmal in nature.² Pathologically, the sarcoid granulomas appear to produce their clinical effect primarily by their mechanical interference with myocardial and conduction tissue. That the cause of sudden death may not only be secondary to the granulomatous myocardial lesions, is best exemplified in the case study, where over thirty sections taken from the myocardium revealed only four sarcoid nodules. A more

important factor could be the association of a myocarditis. This might play a decisive role in damaging the heart and lead to its failure. It is of interest from the standpoint of etiology, that virus particles have been isolated from cutaneous lesions with histopathological changes typical of sarcoidosis. Preliminary tests showed that the virus probably belongs to the Influenza-Mumps-Newcastle groups of viruses.⁵ Studies by electromicrographs of erythrocytes from a patient affected with sarcoidosis, revealed virus like particles with a diameter of 240 to 250 millimicrons and resembling the virus of measles and the virus bodies of infectious mononucleosis. Similar bodies could not be demonstrated in normal human blood subjected to the same procedure of preparation.⁶ The available data are however still too limited, to permit definite conclusions concerning the etiologic significance of the isolated virus for the development of sarcoidosis.

The foci of myocarditis discernible with the light microscope were of small size and rather focal, and could easily be missed if

only a few sections are examined. It is probable that more extensive foci of heart damage not discernible with the actual methods of study be present. The exact etiology of the myocarditis is difficult to determine, since there was no clinical evidence of the usual causes capable of producing a myocarditis. It is possible that cardiac sarcoidosis may predispose to a viral myocarditis and therefore explain the sudden death so frequently observed. It is suggested when sarcoid of the heart is present, a greater number of sections be taken in search for foci of myocarditis.

Summary

A case of disseminated fatal sarcoidosis with cardiac involvement is presented. An interstitial myocarditis was associated with the cardiac lesions. It is possible that cardiac sarcoidosis may predispose to a viral myocarditis and explain the sudden death so frequently observed.

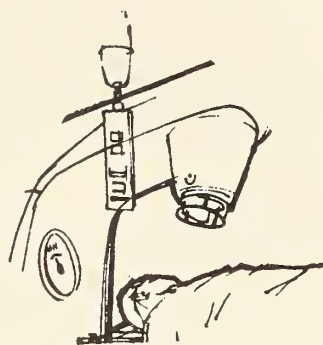
Acknowledgment: I wish to thank Dr. Jose Di Mauro for performing the autopsy and Dr. W. Thompson for reviewing the manuscript.

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Medical Progress

Harvey Kravitz, M.D./progress editor



PROGRESS IN THE TREATMENT OF EMPHYSEMA

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CHRONIC OBSTRUCTIVE PULMONARY emphysema is a degenerative disease which, like all such diseases of vital organs, tends to be progressive, becoming first bothersome, then crippling, and finally fatal. It is frequently associated with large emphysematous blebs and/or localized bullous disease.

The incidence of this process is increasing rapidly, more rapidly than is that of bronchogenic carcinoma. Why this has come about is a question that remains open for investigation. Perhaps the basic reasons rest within a prediction set forth by Head and Avery in 1949: "It seems probable that bullous emphysema may become a more pressing medical problem in the future as the antibiotics permit more persons to survive severe respiratory infections and as more people live into the later decades of life." There are, however, many other factors to be considered.

That emphysema is severely crippling and uniformly fatal is unquestioned. In individuals affected with this disease it is only a matter of time before they are confronted with intercurrent infection, respiratory acidosis with severe acid-base imbalance, or cor pulmonale and right heart failure, any one of which eventually pro-

duces their demise. What, then, can be accomplished in a disease whose etiology is obscure, whose prophylaxis is unknown and whose cure is impossible?

Because the damage to the lung is irreversible it cannot be cured. Treatment therefore must be palliative, directed to relieving the symptoms and slowing the progression. It is both medical and surgical. The two are closely interrelated, so much so that total care of the emphysematous patient is incomplete without such combined therapy.

Medical management is directed to clearing up the bronchial infection which complicates most cases, to preventing acute recurrences of damaging infections, and to relieving whatever bronchial spasm may be present.

Surgical treatment, which is the subject of this paper, consists in the resection of emphysematous blebs and bullae and of those portions of the lungs which are most seriously affected. To speak of removing portions of lung to relieve shortness of breath seems paradoxical and even absurd. It begins to appear reasonable only when one has a complete understanding of the pathology and the pathological physiology of the disease and the manner in which

these affect the mechanics of pulmonary ventilation.

These subjects will be discussed under the headings of: (1) emphysematous blebs; (2) emphysematous bullae; and (3) diffuse obstructive emphysema (the basic disease).

Emphysematous Blebs

Miller described emphysematous blebs as localized air pockets within the lung which come about as the result of alveolar rupture into the subserous connective tissue layer of the pleura. The air escaping into this subpleural layer dissects the pleura from the underlying alveolar structures in a progressive fashion. Frequently these localized air pockets attain tremendous size and become an important cause of dyspnea.

Such large blebs are to be differentiated from pulmonary cysts which are congenital in nature. They must be separated from the common small apical blebs which are the result of previous granulomatous infection in the apex of the lung. These are limited in size and extent by fibrous reaction in the subserous pleural layer. They are a frequent cause of spontaneous pneumothorax but otherwise are rarely an important cause of dyspnea. They require no further consideration here.

Large blebs progressively increase in size. They also vary tremendously from hour to hour and day to day depending on the activity and respiratory status of the host. This comes about as the result of several mechanisms.

During normal respiratory activity the active force of inspiration is greater than the passive expiratory action. Nevertheless, the elastic recoil of the lung and the changes in the dynamics of the thorax are sufficient to deflate the unobstructed portions of the lung. When there is expiratory bronchiolar obstruction there is then retention of inspired air in this region with increased pressure in the air-filled space. This ball-valve mechanism exists early in the development of all emphysematous blebs. As the pressure builds up within this structure and rises above that of the inspiratory effort a second mechanism takes over.

The base of an emphysematous bleb is covered with multiple small alveolar or

bronchiolar openings which open on expiration to permit the ingress of air and close on inspiration. This seemingly paradoxical sequence has been observed at thoracoscopic examination. It is due to the fact that during expiration as the intrathoracic pressure increases the pressure within the lung rises to a level above that within the bleb thus forcing air out of the lung and into the air filled space. During inspiration as the intrathoracic pressure decreases or becomes more negative the pressure within the bleb greatly exceeds that within the surrounding lung with the result that the alveolar-bronchiolar openings are forced shut thus entrapping more air in the enlarging space. Such a mechanism is severely aggravated by coughing, sneezing or straining against a closed glottis. This explains the frequent variations in size of these lesions.

As a result of these two mechanisms such a lesion gradually increases in size until it reaches a dimension beyond which it loses its elastic properties. Here a third factor comes into play. This has to do with the maintenance of the stretchability of the tissues concerned and their loss of the property of elastic recoil. As a result of this molecular disruption or rearrangement the bleb no longer fluctuates in size but continues to stretch and increase to tremendous proportions. Often such a lesion will fill an entire pleural space compressing any normal elastic lung tissue out of function.

Emphysematous Bullae

Bullae are similar to emphysematous blebs in that they are large, air-filled, space occupying cavities within the lung. They come about, however, as the result of the rupture of atrophic and dilated alveoli. What initiates the alveolar disruption and coalescence is a matter that remains open for study. It occurs and thereby sets in motion a chain of events that is identical to that described in the formation of emphysematous blebs. In addition these large bullous cavities are at least partially surrounded by elastic lung and are supplied air by tortuous distorted bronchi. As the large air pocket expands and the surrounding elastic parenchyma is compressed these

tortuous, distorted bronchi become more obstructed. Air is thus entrapped within the cavity.

Discussion

Frequently these lesions are solitary and occur in otherwise normal lungs. They may be segmental or lobar in origin. Often, however, they are multiple and bilateral especially when associated with diffuse chronic obstructive emphysema.

Emphysematous blebs and bullae produce their deleterious effects through the fact that they are non-functioning, space occupying lesions which progressively increase in size. In doing so they compress and put out of function the adjacent or surrounding normal lung tissue. They may even progress to the point where the involved hemithorax will increase in size with widening of the intercostal spaces and depression of the involved diaphragm to a maximum inspiratory position. There may be compression and displacement of the mediastinum with interference of venous return to the right side of the heart.

Emphysematous blebs and bullae are frequently the cause of spontaneous pneumothorax. This is often acute, rapidly progressive and life threatening for the remaining normal elastic lung tissue is the tissue that collapses. The functionless inelastic lung remains distended with air. Thus a 10% pneumothorax in this situation may be as lethal as a progressive 100% tension pneumothorax in an otherwise normal, healthy individual.

In 1953 Korol reported a study of patients with large emphysematous blebs in which he found the incidence of bronchogenic carcinoma to be 25% as compared to a 6-9% overall post mortem incidence. Since that time a large group of similar cases has been encountered in which the incidence of bronchogenic carcinoma has been 20-25%. It seems certain therefore that large emphysematous blebs are a predisposing factor in the development of bronchogenic carcinoma. Such a relationship has not been reported and does not apply to localized bullous disease.

Only rarely do emphysematous blebs become infected. If and when they do it is

perhaps a beneficial accident for the lesions will then be resolved because the inflammatory exudate closes off the alveolar-bronchiolar openings. Then as the air within them is absorbed or the fluid absorbed or drained the walls adhere and the bleb is cured.

Chronic Obstructive Pulmonary Emphysema (Diffuse Vesicular Emphysema)

Why and how emphysema develops is unknown. In spite of much speculation and the development of many theories, the subject is still open to speculation and the divergent theories are still only theories. In contrast to this there is little or no disagreement concerning the pathology and pathologic physiology. The affected portions of the lung have lost their elasticity and become stretched and voluminous. The loss of elastic recoil effects a partial expiratory obstruction of the smaller unsupported bronchioles so that air enters the affected parts more easily than it escapes from them. Whether this obstruction is primary and causative or secondary to the distention is uncertain as is the question whether the obstruction causes infection or is caused by it. The result is that air is entrapped in the dilated lungs.

The distention of the alveoli and the high pressure developed in them because of the resistance to outflow frequently results in their rupture and coalescence to produce emphysematous bullae and emphysematous blebs when the rupture occurs into the subserous pleural layer. This results not only in the development of large non-functioning space occupying lesions but also produces a loss of functioning alveolar membrane and pulmonary capillary bed. The latter deficit can be demonstrated by pulmonary angiography. It is obvious that these two deficiencies result in a serious loss of respiratory capacity.

I have said that the lungs become voluminous. In severe cases they are too large for the chest. When an intercostal incision is made, instead of collapsing, the lungs bulge out through the opening. Because they are so large, they force the diaphragm down and out of function. They widen the intercostal spaces and resist the

movement of the ribs. They even compress the heart and great veins compromising the venous return to the heart. The resistance to blood flow through them also effects a strain on the right ventricle. In a sense the lungs are compressed into too small a space. This compression of the lungs accounts for the expiratory obstruction of the unsupported bronchioles for it further reduces the elasticity of the lungs by relaxing and folding the elastic tissue fibers on themselves.

As Laennec pointed out in his classical description of emphysema, the disease, although diffuse, is rarely evenly distributed throughout the lungs. Usually it is severest either at both apices or both bases. In areas where it is the worst there are always blebs and/or bullae. The condition may occasionally be limited to a single lobe or segment. In every case, however, there are portions of the lung which remain normal and retain their elasticity. And simply because they are elastic these normal areas are the ones that are first collapsed and compressed by the dilated, obstructed and stretchable affected areas.

Discussion

In the respiratory function tests all of these changes produce a reduction in vital capacity. More seriously and characteristically they reduce the maximum breathing capacity (MBC) and the timed vital capacity (TVC) and increase the residual lung volume (RLV). The former is the maximum amount of air that can be moved by rapid breathing in a given time. The timed vital capacity is that percent of the vital capacity which can be forcibly exhaled in a given time. The residual lung volume is the amount of air which remains in the lungs after a complete exhalatory effort.

One can begin to see that were the emphysema equal throughout both lungs and there were no such space occupying things as blebs and bullae simply reducing the size of the lungs might improve the breathing. It would narrow the intercostal spaces and raise the diaphragms thereby bringing them back into function. It would also relieve the pressure on the great veins and auricles. By removing them from the compressed

state it would relieve the expiratory obstruction of the smaller unsupported bronchioles by unfolding and stretching the elastic tissue fibers. All this would result in an increased maximum breathing capacity and timed vital capacity and a decreased volume of residual air. In addition by resecting the worst areas and those containing blebs and bullae (areas which are non-functional and purely space occupying and which by further stretching enlarge steadily) one not only fits the lungs to the thorax but also brings back into function whatever lung areas are still normal and elastic.

Parameters of Evaluation

In making the diagnosis of emphysema we must bear in mind that patients are already too frightened of the disease. X-ray studies alone are not enough to establish a diagnosis. First and most important the patient must be short of breath. Thereafter a careful history will elucidate other symptoms that are characteristic of the disease and will rule out an allergic problem. Combine this with adequate physical examination and other causes of shortness of breath can be eliminated. X-ray and pulmonary function studies can be accomplished along with electrocardiographic tracings. These, when viewed in the light of other findings, can establish a diagnosis of pulmonary emphysema.

Once the diagnosis has been made the selection of cases for surgery is important and must be carefully done. Before any surgical approach is considered in an individual with emphysema (with or without blebs or bullae) certain studies should be completed. When selection has been accomplished such therapy should not be undertaken without the most thorough consideration of the patient's particular problem and the most careful evaluation of his general medical status. The emphysema and allied medical problems must be brought to an optimal pre-operative condition by careful intensive medical management. Any short cuts or oversights in the pre-operative evaluation and preparation are very apt to result in fatal outcome. The improper selection of cases may produce a similar result or may afford the individual no benefit.

Chest Roentgenograms

The routine posterior-anterior and lateral chest roentgenograms will often localize the disease process sufficiently in the case of emphysematous blebs and bullae. Both, however, will occasionally be hidden from view by surrounding normal lung and can be localized only through oblique studies which have been exposed a few kilovolts lighter than usual because of the decreased density of the lung tissue.

The differentiation between large blebs and bullous disease usually is not difficult. The former appear as dark air-containing spaces with a fine hair-line border which is usually concave at its upper and lowermost margins. This concavity may be accentuated or brought into relief by a slight haziness in the surrounding lung which represents compression atelectasis. Bullous spaces are similar in appearance but are usually crisscrossed with fine, lacy filaments of lung tissue. On occasion, however, differentiation between the two processes can be made only at the time of surgery.

Bronchoscopy

Endoscopic evaluation of the tracheo-bronchial tree is of importance in evaluating the degree of endobronchial infection and in gaining adequate specimens for bacteriologic study.

One can also gain a good impression of the degree of broncho spasm present in the particular situation.

In the case of apparent unilateral emphysema or disease which appears more localized this procedure is of value in ruling out any bronchial obstructive process as the underlying cause.

Bronchoscopy may also be of importance in differentiating emphysematous blebs from bullous disease. The former will often produce significant bronchial displacement which can be seen endoscopically while the latter rarely if ever does so unless extremely well localized.

Bronchography

Contrast studies of an emphysematous lung are characteristic of this disease in that the material fails to run out into the finer bronchi and there is rarely any alve-

olar insufflation. The bronchi then appear to be short and stubby but without any evidence of bronchiectatic involvement. Why this occurs is not clear but it must mean that these finer air passages are less patent than usual. Whether this is due to obstruction by mucus plugs or secretions or due to narrowing by edema, inflammation or spasm is uncertain.

On occasion there will be bronchiectatic disease in association with emphysema. This does not occur as often as one would believe and has been encountered by the author only once in several hundred cases. When it does occur it is usually only with very localized disease of both types.

In situations where one finds it difficult to differentiate between blebs and localized bullous disease bronchography will point the way by accurately demonstrating bronchial displacement and compression of normal lung tissue. This occurs much less frequently in bullous disease. When combined with other studies it may be the deciding factor in making the distinction.

Pulmonary Angiography

Evaluation of the pulmonary vascular bed is essential for planning any resectional procedure. By this means one can determine the relatively avascular portions of lung tissue which are obviously non-functional. These areas usually correspond with the areas of over-distention. Thus the non-functioning areas of lung which warrant resection are clearly delineated.

Radioisotope Lung Scanning

The recent development of these procedures has practically replaced pulmonary angiography.

Perfusion lung scans performed after the intravenous injection of I^{131} tagged macro-aggregated serum albumin give an accurate picture of those areas of lung which are not being perfused as a result of alveolar capillary destruction.

Ventilatory lung scans performed after the inhalation of technetium sulfide under positive pressure will give an accurate picture of those areas of lung which are poorly ventilated as a result of alveolar disruption or bronchiolar obstruction.

When the two scanning procedures are

compared one will find that the perfusion and ventilatory defects correlate quite accurately. Thus the non-functioning areas of pulmonary tissue are clearly outlined from both the perfusion and ventilatory points of view and indicate those areas of lung which can and should be eliminated.

Experience has shown that these studies can be fallacious, if not confusing. On occasion the perfusion defect will not correlate with the ventilatory defect indicating perhaps that resectional procedures should not be undertaken in this circumstance. In other situations a routine posterior-anterior projection scan will show no defect in either of the isotope studies. When this occurs it is best to perform these studies in other projections for poorly perfused and ventilated areas may be surrounded either anteriorly or posteriorly by normal tissue. Only by such techniques can the abnormal or non-functioning areas be detected.

The radioisotope scans are of value mainly in lungs diffusely involved. Those which harbor gross blebs or localized bullous disease present little problem for the non-functioning space occupying air pockets are obvious on less refined studies and require resection for alleviation of symptoms.

Pulmonary Function Studies

The clinical impression of an obstructive pulmonary defect is easily corroborated by ventilatory studies. Not only can the severity of the disease be quantitated but also one can estimate what role the element of broncho spasm plays in the total picture. This is important in the pre- and post-operative management of the patient.

When these studies indicate a combined respiratory defect (obstructive and restrictive) such as encountered in pulmonary fibrosis and emphysema and emphysema with cardiac failure, etc., perhaps it is wise to eliminate such individuals from surgical consideration depending on the severity of the combined disease and whether or not there are associated non-functioning, space occupying air pockets whose removal would afford considerable benefit.

If there is any one study within this battery of tests which really contra-in-

dicates surgical therapy it is the maximum breathing capacity (MBC) or maximum voluntary ventilation (MVV). Although usually considered an unreliable study, when it is markedly deviated from normal and is correlated with other abnormal findings it becomes a rather valuable test. In the author's experience a maximum breathing capacity under 25-30% of predicted normal usually indicates a very poor operative risk.

Respiratory studies are of little value in the early post-operative period (under 6-8 weeks) for they will only reflect changes and perhaps decreased function secondary to the surgical procedure itself.

In the late follow-up of emphysematous patients such studies will often document any improvement in function. This is especially so in cases of large blebs and localized bullous disease. However, in studying individuals who have diffuse emphysema the author has been unable to demonstrate significant change in function that will correspond to the marked subjective and otherwise objective improvement in their respiratory capacity post-operatively. The value of these studies then, in attempting to demonstrate improved function as a direct result of surgical therapy, is questionable especially in patients with bilateral diffuse disease unless there are large air pockets which have significantly reduced the vital capacity above and beyond any reduction produced by the diffuse disease itself.

Arterial Blood Studies

The most accurate means of determining respiratory function lies within the determinations of PO_2 , PCO_2 and PH on arterial blood samples. These studies are of inestimable value in the day to day management of the immediate post-operative course. At times it may be necessary to monitor these parameters continuously. Respiratory acidosis and hypoxia can develop quite rapidly post-operatively especially if there is any air way obstruction of even a minor degree (retained secretions) which has gone unnoticed. Only through frequent determinations of the arterial blood gases can a hazardous outcome be avoided.

In association with these studies frequent determinations of the blood electrolytes must be done in order to complete the clinical picture.

Cardiac Catheterization

It has been recommended by some who are interested and active in the medical and surgical management of emphysema that all patients be studied by cardiac catheterization prior to any surgical therapy. This has not been found necessary in the practical management of this disease.

Surgical Treatment

Because of the different problems encountered in the various forms of emphysema it is best to discuss the surgical management under two classifications.

Large Emphysematous Blebs and Localized Bullous Disease

Large emphysematous blebs and localized bullae require surgical extirpation for the reasons previously discussed. To summarize: (1) They are non-functioning, space occupying lesions which collapse normal functioning lung in the same manner as does a pneumothorax and they do so in a progressive fashion, (2) they produce recurrent or chronic pneumothorax, and (3) they predispose to the development of bronchogenic carcinoma (blebs only).

The excision of diseased portions of lung in the form of blebs or localized bullous disease has come about through the surgeon's hand being forced to intervene in the face of life threatening tension pneumothorax or chronic pneumothorax producing incapacitating dyspnea. Such experiences plus the development of assisted or controlled respiratory support through mechanical respirators have made the open operation and resection of diseased lung the procedure of choice. Occasionally an individual is so debilitated or such a respiratory cripple as the result of severe bilateral disease that intracavitary decompression would be the initial step in the total surgical management of the problem.

The technical problems that arise in resectional surgery in the way of persistent air leaks or blood loss into the pleural space or the lung itself have not been insur-

mountable. The removal of complicated blebs and bullous disease has become a simple matter. This is accomplished by wedge resection utilizing a special Roux suture which is both hemo- and aerostatic and is reinforced with a second suture layer in a lock-stitch fashion. Blebs and bullae which are segmentally localized are best managed in this fashion. Lobar bullous disease in otherwise normal lung is best handled by lobectomy. Segmental resection is hazardous.

Results

The benefit gained by surgical treatment of emphysematous blebs and localized bullous disease depends on whether or not they are associated with underlying diffuse pulmonary emphysema. Where there is no such associated disease the removal of these large air-filled structures will give excellent immediate and long term results in 100% of cases. These individuals are cured of their dyspnea. They account for 57% of all patients in this group.

The remaining 43% of cases have diffuse pulmonary emphysema in association with the blebs and localized bullous disease. In this situation excellent immediate results are noted in 100% of cases. The long term results can be classified as good in 66% of cases. These patients will note quite a significant relief of their symptoms and be able to return to a functional status for a period of 2-12 years before they succumb to the disease.

The operative mortality in this group of cases is zero.

Chronic Obstructive Pulmonary Emphysema (Diffuse Vesicular Emphysema)

In this disease the selection of patients for surgery is very difficult and extremely important. The rationale for surgery is more complicated. Here the inelastic lungs are simply too large for the thorax and are crowded into it. This interferes with the mechanics of respiration and circulation. It forces the diaphragm down and out of function. The resultant collapse and folding of the elastic structures contributes to the expiratory obstruction of the unsupported bronchioles. The increased pressure on the great veins and atria produces a

relative cardiac tamponade. Although a diffuse disease the lungs are rarely uniformly involved so that those areas which are most distended, most inelastic, and most obstructed compress and put out of function the more elastic and normal lung tissue.

Surgical resection of the severely involved areas is directed not only at removing destroyed, non-functioning tissue but also at decreasing the size of the lung whereby the diaphragms are raised, the expiratory obstruction of the unsupported bronchioles is relieved by restoring the elastic recoil force acting upon them to maintain their patency, and the increased pressure on the heart and great veins is eliminated. Such resection also returns the more normal lung portions to a functional status for they are no longer compressed and obstructed by the adjacent overdistended, inelastic but stretchable lung tissue.

At one time it was felt that intervention by means of transthoracic exploration and resection of destroyed lung should be avoided for the inflammatory changes produced in the lung and pleura as a result of the procedure would seriously impair the vital capacity which may already have reached minimum functional tolerance. This concept has not been supported by experience. Also it may be that the creation of pleural adhesions is beneficial in that it transfers the fixed point of elastic recoil from the central hilar position to a peripheral pleural location whereby the resultant recoiling force is applied to the unsupported terminal bronchioles thereby maintaining their patency during the expiratory phase of respiration.

Resectional surgery via transthoracic intervention is the preferred approach in this form of the disease. This most always requires respiratory support through mechanical respirators during and after the operative procedure. The technique of resection is as discussed under the treatment of blebs and localized bullous disease. However, in operating for diffuse obstructive emphysema, with or without blebs or bullae, the aim is to remove the non-functioning portions and to trim off the most severely affected areas so that the lung will be decreased in size. Enough must be removed

so that the lung will no longer be crowded into the thorax but not so much that it will no longer expand to fill the pleural space. Considerable judgment is required to avoid either overtrimming or undertrimming the lung.

The Brantigan operation is based on the principles of reducing the size of the lungs so that they will fit into the thoracic cage without compression and its resultant folding of the elastic fibers. This is accomplished by trimming down the size of the lung through multiple wedge resections around the periphery and edges of the lung without paying much attention to removing those areas most severely involved with the disease. Here again considerable judgment must be utilized so that neither too little nor too much lung is resected. In Brantigan's experience bilateral resection must be accomplished in order to expect significant improvement without later regression.

Another technique of eradicating severely diseased areas of lung has come about as the result of clinical observations in a number of patients. In following cases with this disease, instances have occurred in which inflammatory or cicatrizing segmental or lobar bronchial obstruction has produced a gradual total atelectasis of portions of lung severely involved with emphysema. At the conclusion of such a process the patients have noted a significant increase in their respiratory reserve. This has led to the concept of controlled surgical obstruction of lobar bronchi leading to severely involved emphysematous areas of lung. This is accomplished without resectional surgery by means of transthoracic division of the desired lobar bronchus and suture closure of the proximal and distal bronchial stumps. Theoretically this will produce a gradual atelectasis of the involved overdistended area with resultant release of compression and bronchial obstruction of the adjacent normal functional lung tissue. In employing this technique it is mandatory that accurate pre-operative localization of the poorly ventilated and perfused areas of lung is obtained through conventional roentgen studies and pulmonary angiography or radioisotope scanning techniques.

(Continued on page 344)

NON-CRIMINAL FORENSIC PATHOLOGY

A Panel Discussion:

Edited by James B. Hartney, M.D./chicago

THE INVESTIGATION of deaths under unusual or suspicious circumstances is an important function in our society. Prompt, unbiased and adequate examination of the circumstances in such cases helps to protect the community from wrongdoers and the individual from unjust accusations of foul play. Much interest has been generated of recent years in the exact methods most appropriate to the accomplishment of such examinations. In an attempt to bring recent advances into focus in the context of the laws of Illinois, the Illinois Society of Pathologists devoted its 1962 Annual Seminar to the topic of "Non-criminal Forensic Pathology." The meeting was held at St. Mary's Hospital, Decatur, Illinois on December 1, 1962. A panel of four experts discussed recent technical advances in the study of deaths suspected of being due to accident or undue means, and changes in the basic legislation affecting the investigation in such deaths in Illinois. Their remarks are summarized as follows:

MR. PHARES G. THOMPSON
Coroner, Macon County

The office of coroner is an ancient one, rooted in the English Common Law and

Director Clinical Laboratory, St. Anne's Hospital, Chicago; Chairman, Committee on Slide Seminar, Illinois Society of Pathologists.

traceable to Anglo-Saxon times. The functions and responsibilities of the coroner are variously defined in the several States; in all cases, homicide, suicide, and violent deaths are investigated. Sudden and unexplained deaths and unexpected deaths without medical attention are not covered by the law in many states.

Of paramount importance is the performance of adequate examinations to determine the mode and manner of death; this is deemed more important than the title of the officer charged with the administration of justice. Results of these examinations are important not only to the legal authorities but also to insurance carriers. In the opinion of the speaker, the major function of the coroner's office is the determination of facts, medical and legal. To function at its best, the office requires the cooperation of representatives of both the medical and legal professions in the community.

EDWIN F. HIRSCH, M.D.
Chairman, Advisory Board on
Necropsy Service to Coroners

The General Assembly of 1870 established that each of the 102 counties in the state of Illinois should elect a coroner for a period of four years, but did not specify the duties of that office. The duties were defined in 1874 but no further significant

changes were made until 1955. In that year, culminating studies and discussion begun in 1952, two bills were introduced in the General Assembly. One of these bills defined the functions and responsibilities of the coroner and emphasized the desirability of enlisting the services of a pathologist to perform the medical examinations required to guide the coroner in formulation of his decisions. The second bill set up the Advisory Board on Necropsy Services to Coroners. The 102 counties of Illinois were divided into two classes, having population less than or greater than 500,000. In the first group, counties under 500,000 population, Deputy Examiners were appointed by the Illinois Department of Public Health on the recommendation of the Coroner while in the single county (Cook County) having a population greater than 500,000, Deputy Examiners were to be appointed directly by the Coroner. The bill defining the duties and responsibilities of the Coroner was vetoed by the Governor, but the bill providing for the establishment of the Advisory Board was signed into law and the Board was organized January 18, 1956. In 1957, the General Assembly passed and the Governor signed a bill defining duties and responsibilities of the coroner's office. Another bill, in 1959, provided for the establishment of two laboratories of Toxicology in the State Health Department, one in Chicago and the other in Springfield.

Shortly thereafter, the incumbent Coroner of Cook County accepted the recommendation of a committee composed of representatives of the Institute of Medicine of Chicago, the Chicago Medical Society, and the Deans of the medical schools in Chicago. Pursuant to recommendation of this committee, the Cook County Board submitted a proposed bond issue to the voters; this was adopted and funds made available for rehabilitation of the morgue building at Cook County Hospital, to be made available to the Coroner's Office following completion of the Hektoen Institute, which was to provide space and facilities for the Department of Pathology of Cook County Hospital.

At the present time (1962), extensive renovation is in an advanced stage. Improved and thoroughly modernized mortuary and autopsy facilities are being provided, in keeping with the great increase in services required of the Office of the Coroner of Cook County. An indication of the magnitude of these services is afforded by comparing figures for 1952 and 1960. In the later year, there were 52,500 deaths in Cook County (a 10% increase over 1952). Of these approximately 20% (10,000) were reported to the Coroner of Cook County and autopsy was performed in approximately 20% of these cases; in 1952, only 14% of a smaller number of deaths were autopsied. Of the total number of autopsies, 1,100 (approximately 50% of the cases referred) were performed at the Cook County Morgue while the remainder of the examinations were carried out by the District Coroner's Physicians. It should be noted that approximately 50% of the population of the State of Illinois lives in Cook County.

RUDOLPH MUELLING, M.D.

**Professor of Pathology & Director,
Division of Legal Medicine,
University of Kentucky Medical School**

One of the most important functions of the medico-legal examiner is the determination of natural deaths occurring under suspicious circumstances. An unsung function of forensic pathologist is the protection of the innocent, rather than chasing the wicked. You never read in the paper that "Mr. Jones" was accused of murder, taken and held in a cell, only to be released when autopsy revealed that the supposed victim died a natural death. A number of examples are cited: An elderly man was found in a disarranged room, suggesting murder in the course of a robbery attempt. Autopsy revealed an adrenal pheochromocytoma and cerebral hemorrhage. Hypertension related to the functioning tumor was a predisposing cause to hemorrhage which was not immediately fatal; the handicapped victim of this chain of circumstances severely disarranged his room in his frantic and unsuccessful attempt to summon aid. In another instance, a man

found dead on the street in a pool of blood was demonstrated to have died of an exsanguinating pulmonary hemorrhage related to vascular erosion by a lung abscess. Other causes of sudden and unexpected death under suspicious circumstances have included meningitis, encephalitis, pulmonary embolism.

The development and exploitation of a number of new techniques have contributed markedly to the information which can be collected by a trained observer. Myocardial infarction at a stage too early to produce demonstrable gross or histologic change may be identified by chemical study of extracts of heart muscle which can be shown to contain smaller than normal amounts of transaminase. In the presence of early infarction, damage to cardiac muscle cells is associated with loss of enzymes from the myocardium to the peripheral blood where it might be demonstrated by examinations conducted during life. Its post-mortem demonstration in blood, however, is complicated by the post-mortem accumulation of enzyme from other than myocardial sources, especially the liver.

The toxicologic study of poisoning, both criminal and non-criminal, is facilitated by the application of a number of newer techniques. These include separation of and identification of alkaloids by paper chromatography, the separation of chemical homologues such as ethyl and methyl alcohol and the identification of other volatile substances by gas chromatography, the use of spectrophotometry in the infra-red and ultra-violet ranges, polarography, the iden-

tification of toxic substances produced by living agents (such as snake venom, bacterial toxin or antibiotics) by the application of specific precipitin reactions. Allergic reactions to antibiotics may be further studied by the passive transfer of antibodies (Prausnitz-Kustner reaction).

ROBERT V. BLANKE, Ph.D.
Chief, Bureau of Toxicology,
Illinois Department of Public Health*

The recently established laboratories of toxicology in Chicago and Springfield are equipped to carry out studies involving the use of infra-red and ultra-violet spectrophotometry, gas chromatography, paper chromatography and polarography. The facilities are available to coroner's offices but not to routine diagnostic laboratories. They will also do work in the fields of air and water pollution and environmental toxicology, in conjunction with the Sanitary Engineering Division of the Illinois Department of Public Health.

The State of Illinois Department of Public Health is planning to survey the facilities of clinical and hospital laboratories throughout the State in order to determine what toxic substances can be detected by laboratories now in existence.

Dr. Blanke distributed draft copies of a tentative statement of policy and instructions for collection of specimens, as it applied to postmortem material. It is contemplated that a permanent statement will be drawn up in the near future, will be printed in the form of a booklet, and distributed to Coroners and Coroner's Pathologists throughout the State.

**Now with State Medical Examiner's
Office, Richmond, Va.*

FETAL DISTRESS: LESSONS OF THE FETAL ELECTROCARDIOGRAM

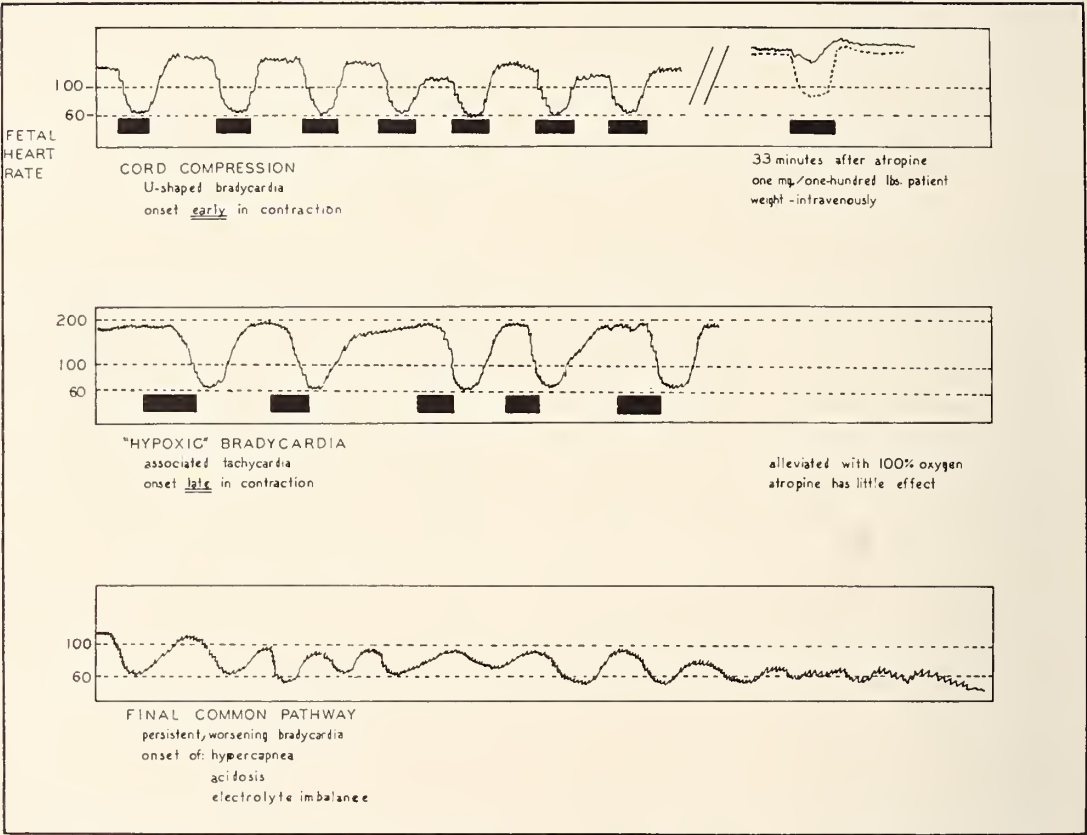


FIGURE 1. A composite showing patterns of bradycardia seen with cord compression and "pre-cord hypoxia." Solid black bars represent contractions.

"Disease is from of old and nothing about it has changed. It is we who change, as we learn to recognize what was formerly imperceptible."

CHARCOT

THE OBSTETRICIAN, more than any other member of the medical profession, is responsible to and for the future. And yet, the effects of what he does or does not do on behalf of his patients may not be visible for many months or even years. As a consequence, although it has always been recognized that birth is dangerous for the fetus, until recently, only gross hazards have been appreciated. The subtleties of fetal distress and its far-reaching consequences are just beginning to be understood. The development of continuous fetal electrocardiographic monitoring has lighted a candle in the darkness. Coupled with increasing knowledge of fetal and newborn pathophysiology, it can help prevent the marginally developed child.

Electrocardiographic Monitoring

The body is a volume conductor which may be represented as a large cellophane bag containing salt-water and a small electrical pulsor, the heart, in its center. Einthoven was the first to recognize and record the peripheral potentials of the adult heart, and Cremer fortuitously recorded the fetal electrocardiogram (FECG) in 1906.¹

Modern electronics has made it possible to continuously monitor the FECG and to evaluate it in several ways. The basic data acquisition system in use at our institution has been described by Davis and Foote.² We have modified this system by the addition of electrodes clipped directly to the fetal scalp after the membranes have ruptured. The scalp electrode gives a clearer fetal signal.

The FECG is analyzed for fetal heart rate (FHR) and configuration of the waveform. The FECG and FHR are studied

for possible changes related to uterine contractions. Uterine contractions can be monitored in several ways, the simplest being manual palpation. Continuous monitoring requires electronic evaluation. Changes in intra-amniotic fluid pressure may be monitored transabdominally, by means of an intrauterine catheter introduced through the vagina, or by means of Stander's modification of the Malnström external tocodynamometer,³ which yields a close approximation of intra-amniotic pressure values.

Although the investigative equipment we use is complex, our primary purpose in using it, appreciation of FHR changes, may be realized in most instances by an alert accoucheur aided only by a fetoscope and diligent listening.

Fetal Distress

Detection of fetal distress during labor has classically depended on evaluation of the FHR and recognition of the presence of meconium and fetal hyperactivity. The latter parameters are at best gross indicators, and until the advent of continuous monitoring variations in the FHR were not fully appreciated.

From analysis of records obtained by continuous monitoring Hon proposed the following criteria for evaluation of the FHR:⁴

- Normal limits: 120-160 bpm
- Moderate tachycardia: 161-180 bpm
- Marked tachycardia: 181 bpm or more
- Moderate bradycardia: 100-119 bpm
- Marked bradycardia: 99 bpm or less
- Irregularity: deviation of 5% or more from baseline FHR with fluctuation rate of 3 or more peaks per minute
- Regular: deviation of 3% or less from baseline FHR
- Arrhythmia: disturbance in beat-to-beat rhythm

From The Department of Obstetrics and Gynecology, The University of Chicago School of Medicine and The Chicago Lying-in Hospital, Chicago, Illinois.

Early: FHR variation beginning early in contraction

Late: FHR variation beginning late in contraction

Sporadic: less than one episode of FHR variation every 10 minutes

Random: FHR variation unrelated to uterine contractions

Sustained: FHR variation lasting 5 minutes or longer

Transitory: FHR variation of less than 5 minutes in duration

All of these criteria can be fully utilized only in analysis of records from continuous monitoring. However, the definitions of tachycardia, bradycardia and the normal FHR are universally applicable.

Clinical Significance of FHR Changes

The extensive investigations of Hon⁵⁻⁷ and his associates have clarified the significance of fetal heart rate changes during labor. Certain patterns have been recog-

nized which are an early indication of impending or actual fetal distress. Hon⁵ and Caldeyro-Barcia^{8,9} have demonstrated patterns of fetal bradycardia which have ominous significance.

Fetal bradycardia is not normal. The important diagnostic features to look for are: relation of onset to uterine contractions (i.e., early in contraction period or late), recovery to a normal rate (or lack of it), its response to certain procedures, and the presence of associated tachycardia.

The patterns of bradycardia seen with cord compression and pre-cord hypoxia are shown in Figure 1. These patterns in most cases can be identified by careful, persistent auscultation. There are, however, cases where these changes can only be appreciated by fetal electrocardiography.

The relative diagnostic significance of the use of intravenous administration of

"HYPOXIC" BRADYCARDIA PROBABLE SEQUENCE OF EVENTS

1. DECREASED INTERVILLOUS SPACE pO_2

2. FETAL HYPOXIA

late bradycardia

tachycardia

possible meconium staining

3. HUMORAL FACTORS AND SYMPATHETICS

tachycardia

FIGURE 2. Factors in the etiology of "hypoxic" bradycardia.

CORD COMPRESSION→BRADYCARDIA

PROBABLE SEQUENCE OF EVENTS

1. MARKED INCREASE IN VAGAL TONE

?acute anoxia of the vagal center

?marked disturbance of circulatory hemodynamics

2. PROFOUND FETAL HYPOTENSION

3. DEGREE OF FETAL HYPOXIA DEPENDS UPON DURATION

AND MAGNITUDE OF OCCLUSION

FIGURE 3. Factors in the etiology of cord compression bradycardia.

atropine and of breathing oxygen is shown in Figure 1. In cases of pre-cord hypoxia, giving the mother 100% oxygen usually alleviates fetal bradycardia. The bradycardia in cases of cord compression may be changed, but usually not significantly. In cord compression the pathology is not maternal hypoxia with intervillous hypoxia but compromise of cord blood flow. This occasions a marked increase in fetal vagal tone by mechanisms which are not clear. This can be demonstrated by giving the mother 1.0 mg./100 lb. body weight of atropine intravenously. In some 20-30 minutes the fetal vagal hyperactivity will be lessened and the FHR will return toward normal. The bradycardia patterns of pre-cord hypoxia will not change significantly with this therapy. This is not recommended for treatment of fetal bradycardia but for diagnostic purposes only. The fetal bradycardia with its increased diastolic filling

time may be a necessary compensatory mechanism. The changes observed following atropine usually subside in some 50-60 minutes after its administration and the bradycardia will reappear if cord embarrassment persists. The probable pathophysiology of these conditions is seen in Figures 2 and 3. A final common pathway of decompensation is entered if these conditions persist (Figure 4).

Persistent fetal tachycardia, whose significance was recognized only after the advent of continuous monitoring, may be more ominous than bradycardia. There is little or no fetal cardiac compensation. The causes of persistent tachycardia are obscure with one exception, maternal hyperthermia. The pathophysiology of tachycardia, in the absence of maternal fever, is not adequately known but probably reflects a disturbance of humoral and vegetative nervous system (primarily sym-

FINAL PATHOPHYSIOLOGY

HYPOXIA

HYPERCAPNEA

ACIDOSIS

ELECTROLYTE IMBALANCE

FIGURE 4. An outline of the final common pathophysiology.

pathetic) factors. That this tachycardia can be diagnosed by auscultation, and that it is significant, is nicely shown by the work of Joelsson and Westin.¹⁰

Patterns of fetal heart irregularity can be clearly recognized only through continuous monitoring of the FECG. Their full significance is not known but it is well to remember that repetitive deviations from a normal, steady fetal heart rate indicate embarrassment of fetal physiology.

Hypoxia

The fetus depends upon tenuous and intricate vascular exchange mechanisms for its oxygenation. It is known from the work of Assali and others that the fetus is slightly acidotic relative to adults.¹¹ The fetus has less reserve to combat embarrassment of its oxygen supply. If "respiratory acidosis" is added to its relative metabolic acidosis, it is jeopardized. Hypoxia is the great fetal enemy.

Hypoxia has been classified in four major divisions as in Figure 5. Three of these apply directly to the practice of obstetrics. Hypoxic hypoxia is encountered by the fetus when there is some significant defect in transmission of oxygen across the placenta. The causes are numerous, but abruptio placentae and placenta previa are the most severe. Anemic hypoxia is seldom seen in the fetus except in erythroblastosis. Ischemic hypoxia is the result of cord embarrassment. The most severe example is frank prolapse of the cord. Ischemic hypoxia is almost inseparable from hypoxic hypoxia if it persists. Histotoxic hypoxia is almost never seen in obstetrics. The common mechanisms of fetal hypoxia are seen in Figures 6 and 7. If hypoxia is allowed to persist, the fetal reserve is gradually eroded and the fetus enters a state of decompensation from which resuscitation is arduous and often unsuccessful. The final pathophysiology is

HYPOXIA

HYPOXIC HYPOXIA: arterial pO_2 decreased

ANEMIC HYPOXIA: pO_2 within normal limits
hemoglobin available for O_2 decreased

ISCHEMIC HYPOXIA: blood flow decreased
 pO_2 , hemoglobin within normal limits

HISTOTOXIC HYPOXIA: toxic agent does not allow
tissue utilization

FIGURE 5. Characteristics of the four classical types of hypoxia.

shown in Figure 4 on page 336.

Fetal Reserve

The concept of fetal reserve is important. It is this physiologic resiliency that allows the fetus to survive its difficult passage. With the advent of continuous monitoring of the FECG and FHR it was established that as long as the fetus "recovers" between contractions, its eventual safe delivery is likely. However, when the FHR does not return to normal, the fetal reserve is dwindling rapidly and there will shortly ensue a precipitous decline, along the lines indicated in Figure 1. Since one knows that this calamitous state will ensue if a course of watchful expectancy is pursued too long in the face of pathologic bradycardia or tachycardia, a judgment is called for. One must determine, if possible, what is the cause of the FHR abnormalities and judge how long it will be before natural

vaginal delivery will ensue. If delivery is in the distant future, more vigorous methods may be necessary to procure a healthy infant. The attendant has not discharged his duty if the infant merely survives.

The Newborn

The lessons of the fetal electrocardiogram, which have given us a new understanding of fetal distress, are related to conditions now being investigated in the newborn.

The work of Assali¹¹ and others has shown the relative acidosis of the fetus. As previously discussed, fetal distress, evidenced by bradycardia, is related to fetal hypoxia. If allowed to persist, this leads to acidosis. Gamp and Koller¹² declared that all newborns suffer to a greater or lesser degree from acidosis. Indeed, if uncorrected, this may lead to unsuccessful

FETUS

CORD EMBARRASSMENT: ischemic hypoxia
hypoxic hypoxia

> depends upon
duration of
embarrassment

PRE-CORD HYPOXIA: hypoxic hypoxia as far as fetus is
concerned

maternal in origin and basis may
be hypoxic, anemic, or ischemic

FIGURE 6. The etiology of the two most common states of fetal hypoxia which are associated with bradycardia.

resuscitative attempts. How much better, if through appreciation of lessons from fetal electrocardiography, one can prevent severe acidosis by early delivery.

Even more intriguing is the possible relation of fetal hypoxia to the etiology of the ill-defined pulmonary distress syndrome (hyaline membrane disease) of the newborn. Recent work by Chu, et al¹³ links its pathophysiology to fetal hypoxia. Their work, in schematic form, is presented in Figure 8. With early recognition and delivery perhaps some of these tragic choking deaths can be avoided.

A logical extension of continuous monitoring of the FECG is continuous monitoring of the cardiac activity of the newborn. Early results reported by Urbach, et al¹⁴ indicate that this is of great prognostic significance. Patterns of newborn heart rate variation have a definite relationship

to the long-term prognosis of infants.

Summary and Speculations

Increasing knowledge of the fetal environment leads those responsible for the mothers of mankind into areas of greater responsibility. That we know more we must do more.

Continuous monitoring with the fetal electrocardiograph has given us knowledge of the early signs of hypoxic fetal distress. Bradycardia is not normal. Its patterned relationship to uterine contractions and its response to certain procedures are diagnostic. Sustained tachycardia is ominous but not as well defined.

Society, in its increasing complexity, is requiring a higher adaptive intelligence of all its members. Mental retardation is undergoing increasing investigation. We

CAUSES OF PRE-CORD HYPOXIA

ACUTE: abruptio placentae
maternal anemia (hemorrhage)
maternal hypotension
uterine hypertonus
placenta praevia

CHRONIC: frequent, strong contractions
toxemia
hypertension
postmaturity
diabetes
anemia

COMBINATIONS:

FIGURE 7. Illustrating the more significant causes of pre-cord hypoxia.

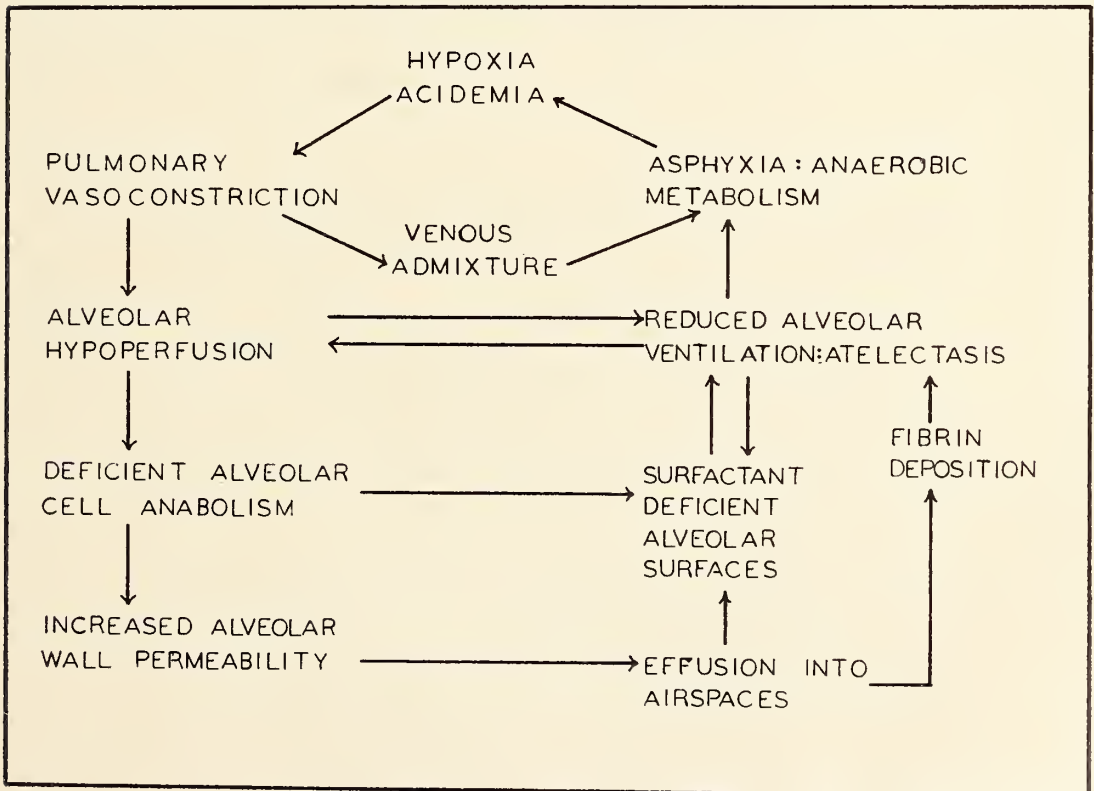


FIGURE 8. Illustrating the proposed pathophysiology in the pulmonary hypoperfusion syndrome. (Adapted from Chu¹⁵)

know that acute fetal hypoxia usually leads to death. It is logical to think that prolonged hypoxia, though compatible with survival, may account for the child with frank mental retardation, or the marginally developed child. We have learned from the FECG to detect prolonged hypoxia. Long-term follow-up of these infants is mandatory to evaluate the subtle defects that may exist. Studies have been begun in several centers but it is too early to evaluate the results.

The use of the FECG is not necessary to appreciate most of these changes. With knowledge of the lessons from continuous monitoring one can reach similar diagnoses by persistent, intelligent auscultation.

Speculative and factual correlations with diseases of the newborn are evident. No longer may the personnel attending the woman in labor take a full measure of pride if the infant just survives its time of trial. Preventive medicine begins in utero and it is our responsibility.

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ASTHMA AND TEMPERATURE CHANGE

The first colder weather of fall is a bad time for asthma sufferers.

When New York City's temperature first dropped below 55 degrees last September, emergency clinic visits by asthmatics shot upward at three major city hospitals. At one hospital, visits were 195 per cent over average during the first colder day, September 25-30.

A recent report shows that similar increases occurred in preceding years. The authors, however, say they do not know the cause.

Asthma attacks were not related to high pollen counts or air pollution, they said. In fact, pollen was at a relatively low level on the days of most frequent attacks.

Asthma attacks may be directly related to cold weather, or there may be an indirect relationship with some other factor, the authors said. *AMA Archives of Environmental Health*, May 1966.

PRACTICAL POINTS IN DIAGNOSIS AND TREATMENT OF PIGMENTED LESIONS

S. W. Becker, Jr., M.D./whiting, indiana

ALMOST EVERY individual develops a brown spot of one type or another during his lifetime. Frequently, the patient sees the doctor for another reason and ends up by asking him "By the way, Doc, what's this brown spot?" Every physician must be somewhat familiar with the different kinds of lesions which can come on the skin, whether they are harmless or dangerous, what the likelihood is of becoming worse or better and what is best to do about them.

Probably the simplest brown spot is the ordinary freckle. People who tend to freckle find this out while young and they know that when the skin is exposed to the sun, brown lesions will develop. In the winter these brown spots will disappear. There is a protective product which is a good blocker of Ultraviolet light to prevent the brown coloration of the freckles. If an individual really detests the freckle, they can be prevented to some extent. The lentigo, the brown spot that looks like the freckle but does not fade in the winter is seen in elderly individuals, is sometimes seen in thousands all over the body and may be associated with given diseases. The Pentz-Jaegher syndrome presents brown

spots on the palms and on the lips and small tumors developing in the bowel. Von Recklinghausen's disease is a syndrome with brown spots on the skin and the formation of soft tumors on the skin or possibly in the nervous system. Chloasma produces a brown spot over the face and there may or may not be an associated disease such as pregnancy or encephalitis. Probably the most common brown spot is the ordinary mole. These are rarely present at birth, tend to develop in the early years, reach a maximum of approximately 40 a person at the age of 30 and then tend to spontaneously disappear after this. Contrary to popular opinion, moles on the palms and soles are quite common, and as a rule, are completely harmless.

It is difficult to decide when to remove a mole and there have been varying criteria put out by different people. As a rule, the mole which is irritated, which is enlarging or which tends to become infected, should be removed simply to prevent the complication of infection or disfigurement. It is highly unlikely that specific single trauma ever changed an ordinary mole into a malignant melanoma.

The malignant melanoma of course, is the brown spot which causes the most concern. These tumors are relatively rare,

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averaging approximately 1 per 100,000 population in each year. They may look like moles to start with, but it is doubtful that most melanomas come from true moles. What the physician must be concerned with, is a mole which does not run true to form, i.e. it develops at the wrong age, or in the wrong location, it grows when it should be shrinking, it has a variegated color instead of a uniform color, it has other changes which makes the lesion suspicious. It is the suspicious lesion which should be removed and sent for microscopic examination. Pigmented lesions, especially where there is a question of

malignant melanoma, cannot be judged on clinical grounds. It is only with study under the microscope that these lesions can be identified clearly.

There are some diseases, such as lichen planus and allergic reactions, particularly those involving sensitivity to the sun, which leave a large amount of disfiguring pigment in the skin. Treatment of these conditions must be very cautious or there will be an additional amount of pigment in the skin. When one has melanin pigment down deep in the dermis, it takes a minimum of nine months for the phagocytes of the skin to remove this pigment.

TETRACYCLINES AND THE TEETH

When they were introduced, the tetracyclines seemed to have many advantages over other antibiotics: the spectrum of organisms they covered was wider; they did not seem to sensitize the patient; and other side-effects were not apparent. The wide popularity they enjoyed, however, made it clear that this too-simple picture had to be greatly modified. Patients did become sensitized and instances of anaphylactic shock, urticaria, angio neurotic edema and photosensitivity were reported. The commonest side-effects seem to be diarrhea and vomiting and discoloration of teeth in children. The staining of teeth was first noticed during the assessment of long-term antibiotic therapy in children with fibrocystic disease, when 40 out of 50 patients so treated were seen to have dark staining. Since then the administration of tetracycline has been amply confirmed as the cause of discoloration. The tetracycline molecule has an avidity for heavy metallic ions and chelates with calcium, so that any tissue undergoing mineralization when the drug has been given has not only calcium deposited in it but also the tetracycline molecule. Thus, after therapy has stopped and sufficient time has elapsed for elimination, a child's bones and teeth still show large areas where the drug has been incorporated; but in the adult areas of bone undergoing repair or remodeling, or calcifying glands will contain the drug. Bone becomes remodeled over the years and will eventually lose any deposited tetracycline; but teeth provide a permanent record of any tetracycline given during their mineralization. *The Lancet*, April 23, 1966.



THE VIEW BOX

Leon Love, M.D.
Director, Diagnostic Radiology
Cook County Hospital

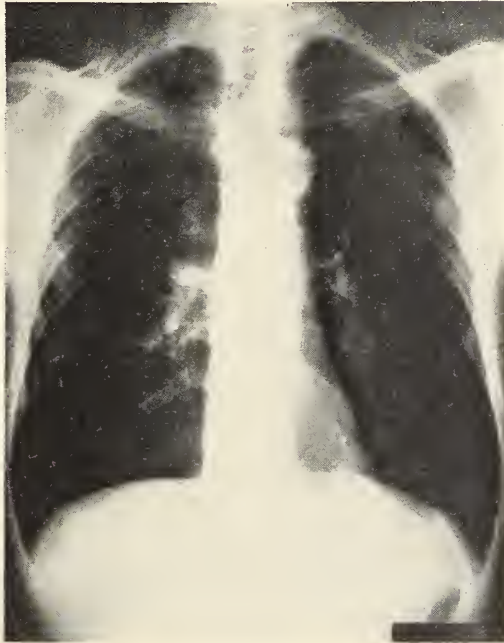


FIGURE 1

This 60-year-old patient was sent to the X-ray Department for an admission chest examination without a clinical diagnosis.

What is your diagnosis?

(Answer on page 364)

Treatment of Emphysema

(Continued from page 328)

This procedure has been used by Chamberlin in the management of tuberculosis in elderly and debilitated patients who otherwise would not tolerate a resectional procedure. It appears to be applicable in the management of emphysema, but has yet to be tried in any extensive series. It is important to recognize that this should not be done at the segmental bronchial level for such occlusion without infection will only produce further progressive emphysema and overdistention of the affected lung segments through collateral ventilation by means of the interalveolar communications.

Results

The experience in this form of emphysema corresponds closely to that encountered in cases of emphysematous blebs and localized bullous disease in association with generalized emphysema. All of the patients note significant improvement in symptoms immediately after they have recovered from the operative procedure. Good late results are obtained in 40% of cases. These patients are improved enough to return to a normal useful life and gainful occupation for a period of from 2-10 years. However they all have a return of symptoms. The disease then becomes progressive and leads to their demise. 40% of cases note poor late results in that their symptoms return and become progressive within a year after surgery. They never return to a useful life.

These findings should not discourage one from employing surgical therapy. All of the patients are benefited by the treatment, a significant percentage so much so that their life would be shorter and more intolerable without it.

The operative mortality in this group of cases has been 20%. With more extensive pre-operative evaluation and the development of mechanical respiratory assistance this should be reduced to a more respectable level.

Discussion

The overall results of surgical treatment in emphysematous disease reveal its palliative nature except in those situations where there are large emphysematous blebs or localized bullae which are not associated

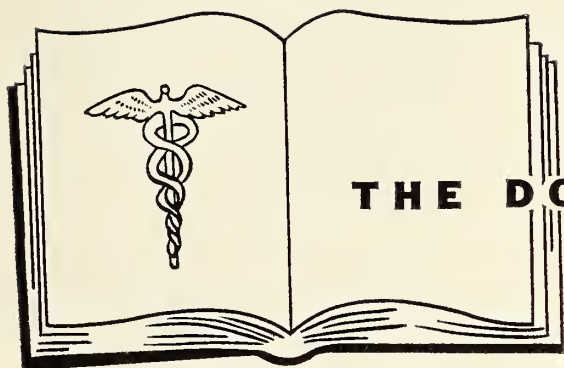
with a generalized process. Here it is corrective and affords a permanent cure. In the other situations the palliation is often marked and of long duration.

In the preceding it must be recognized that much of that set forth is highly theoretical. If this were not so then therapy would be curative in all cases for it would be based upon the true cause of the disease. Yet, some of what has been discussed must have some relationship to the basic etiology or the results of surgical treatment would not be what they are. The palliative nature of all therapy then is a direct result of inadequate knowledge and understanding as to the exact nature of the process. In spite of this we must not stand still until the time comes when further investigations elucidate the cause of emphysema, but should direct our efforts at other modes of therapy which in themselves may lead to a true understanding of the disease.

At the present time the current paths of therapeutic investigation are proceeding along the line of pulmonary transplantation. This is plagued not only with the problem of rejection phenomena and the immune response, but also with the problem of moral and ethical acceptability and availability of appropriate and sufficient organs for this purpose. If and when the major obstacle to such transplantation procedures has been overcome there is little question that the other objections will be eliminated with little effort except perhaps in some religious circles.

Another line of endeavor which is basically therapeutic in direction but may also lead to further knowledge of respiratory function and disease is the development of a totally implantable prosthetic lung. This has been described and is being studied by the author and associates. To be sure others are proceeding in this line. It is only a matter of time before such becomes a reality. The perfection of such a prosthesis would certainly circumvent the problems of immune response, moral and ethical acceptability and ready availability. Whether this would be preferable to homologous organ transplantation is a matter that will be decided in the future.

(Bibliography available on request to the Editor.)



THE DOCTOR'S LIBRARY

HANDBOOK OF PHYSICAL MEDICINE AND REHABILITATION. Edited by Frank H. Krusen, M.D. Associate Editors: Frederic J. Kottke, M.D., Paul M. Ellwood, Jr., M.D. Published under the Auspices of the American Rehabilitation Foundation. W. B. Saunders Company, Philadelphia and London.

All contributors are outstanding men in their fields and from recognized Departments of merit. Twenty-one are M.D.s, the three remaining represent Psychology, Speech, Vocational Counseling, and Social Service, disciplines so vital to rehabilitation effort.

The organization of the book consists of Part One—Evaluation of the Patient; Part Two—Techniques of Management; Part Three—Evaluation and Management of Specific Disorders.

Part One discusses in eight chapters: functional evaluation of the upper extremity, evaluation of gait, speech and language disorders, psychologic assessment and management, psychosocial diagnosis and social services, vocational assessment and management, and electrodiagnosis.

Part Two, of thirteen chapters, discusses heat, with separate chapters on diathermy, hydrotherapy, ultraviolet therapy, electrical stimulation and iontophoresis, massage, therapeutic exercise, transfers, wheelchairs, bed positioning, training for functional independence, homemaking and occupational therapy.

In Part Three there are discussions of the treatment of stroke, connective tissue diseases, spinal cord injuries, fractures, motor unit disease, cranial nerve palsies and brain stem syndromes, degenerative diseases of the central nervous system, back disorders, bowel and bladder

problems, decubiti, cerebral palsy, respiratory disorders, cardiovascular problems. There is no mention of Parkinson's Disease, and little about multiple sclerosis; otherwise, the Management section is comprehensive.

The only specific lacks are in respect to back disorders, a section not thorough enough, and in bracing, splinting, corseting, which should be more detailed in such a reference book. The section on Vocational Counseling, though with some excellent material, is burdened by an unnecessary negativity. Employment, after all, is generally considered to be the usual end point in rehabilitation and, hopefully, most counselors are more treasured by physicians than Mr. Walker implies they are.

There has been a trend in Physical Medicine rehabilitation, perhaps only slightly more than in other fields, to follow very personal opinions and preferences. Some of these are expressed in this text without giving enough discussion to the alternatives. The reader should be allowed some leeway in determining his choice. In respect to bilateral long leg braces, it is not enough to say: "patients who wear bilateral long leg braces need a pelvic band." Medication in the control of spasticity is controversial, but deserves more attention in a definitive text than saying: "in our experience no pharmacologic agent has been of value in relieving spasticity." Only one urinary antiseptic is mentioned, which could imply to an inexperienced reader that it is the only one to use. There are techniques in decubiti prevention not mentioned—if only to condemn.

Henry B. Betts, M.D.

(continued on page 350)

THE DOCTOR'S LIBRARY

(continued from page 349)

CLINICAL ANTICOAGULANT THERAPY by I. Myron Vigran with collaborating authors. Lea & Febiger, Philadelphia, 1965.

A volume on anticoagulant therapy should fill a real need in the medical literature. Dr. Vigran has written a book of some 300 pages which starts with a short history of anticoagulants, proceeds through mechanisms of blood coagulation and atherosclerosis to the general considerations of the clinical usefulness of these agents. The text is generally clear, and the illustrative material is adequate.

The sections tend to be uneven in quality. There is a good description of the chemistry and pharmacology of anticoagulant drugs. The chapter on thrombosis, embolism, and atherosclerosis is less impressive and in particular the section on atherosclerosis is such a brief summary as to be of very little value in such a volume.

It is of interest that the author concludes that subacute bacterial endocarditis is an absolute contraindication to the use of anticoagulant drugs. This would appear to be hardly the case since a patient with pulmonary embolism and infarction complicating the course of bacterial endocarditis might well be properly treated at least for a time with these agents. The author recommends that x-rays of the upper gastrointestinal tract be done on all patients on whom elective administration of anticoagulants has been advised and who are not acutely ill. Those who use heparin will be interested also that the author prefers to use the drug subcutaneously with a 12-hour injection procedure than to use it by the intermittent or constant intravenous route. Dr. Vigran prefers to control oral anticoagulant therapy with the thrombotest method, a technique which is not used as yet by most clinical laboratories as the basic routine.

The author is generally an enthusiast but a somewhat cautious one in regards to the applications of anticoagulant therapy to patients with myocardial infarction. He prefers to treat suspected myocardial infarct cases with anticoagulants even if the diagnosis is not clear cut. He does not refer adequately to the hazard of such treatment in patients with benign pericarditis. He also suggests that all patients with angina pectoris and without a specific contraindication should be on long term anticoagulants. This conclusion is certainly at variance with the views of most workers in the field. The description of the discomfort of "effort syndrome" is inaccurate since the discomfort does not just occur with effort or emotion but more particularly occurs after these events if there is any relation to them at all. It is odd that the description of pulmonary embolism and infarction is listed under "pulmonary hypertensive states" and that chest pain is said to be the most common presenting complaint in acute pulmonary embolism.

It is the conclusion of this reviewer that the book does have a certain utility and has assembled in one place a good deal of information. As a whole, the volume is quite uneven in its presentation.

Oglesby Paul, M.D.

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Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

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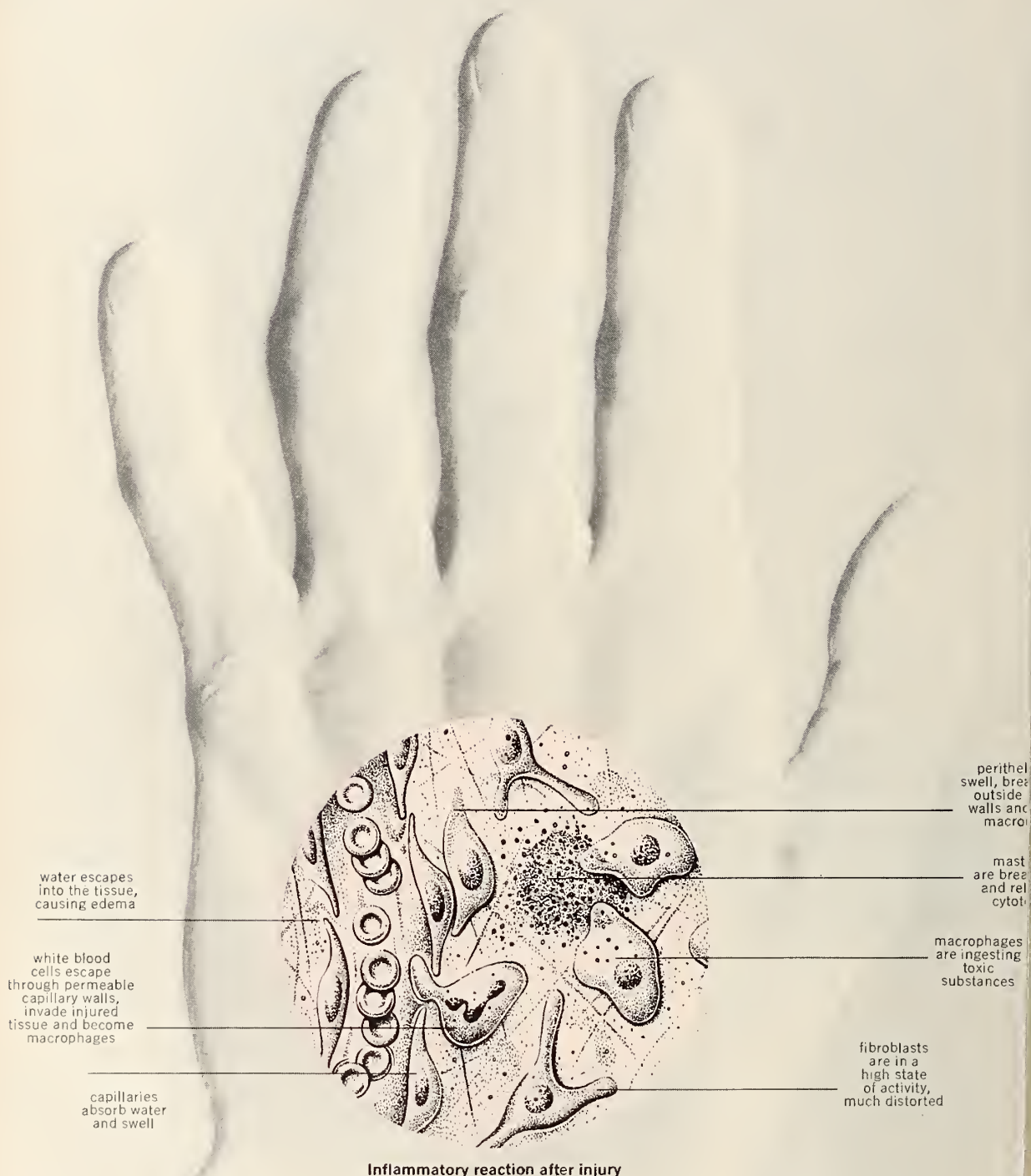
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Contraindications: Tuberculous, fungal, and most viral

lesions of the skin, (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of its components. **Precautions:** Synalar preparations are virtually nonsensitizing and nonirritating. However, the solution may produce burning or stinging when applied to denuded or fissured areas. In some patients with dry lesions, the solution may increase dryness, scaling or itching. The neomycin in Neo-Synalar Cream rarely produces allergic reactions. Prolonged use of any antibiotic may result in overgrowth of nonsusceptible organisms; if this occurs, appropriate therapy should be instituted. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. **Side Effects:** Side effects are not ordinarily encountered with topically applied corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions.

References: 1. Kanee, B.: Canad Med Ass J 88:999 (May 18) 1963. 2. Scholtz, J. R.: Calif Med 95:224 (Oct.) 1961. 3. Jansen, G. T., Dillaha, C. J., and Honeycutt, W. M.: Arch Derm 92:283 (Sept.) 1965.

fluocinolone acetonide—an original steroid from
SYNTEX
LABORATORIES INC., PALO ALTO, CALIF.



THE PRESIDENT'S PAGE

(Continued from page 286)

country, we will continue to give them the service, continue to look after the health of our patients and try to keep up the pledge that we have always made, that the health and welfare of the people of this country is paramount, and so we will try to advise and help, and we must become concerned with the workings in the hospital. We must try to prevent unnecessary admissions, we must try to avoid hospital stays beyond that consistent with good medical care, preserving the continuity of diagnostic procedures and medical care without undue delay. We must shorten the period between recognition of a surgical diagnosis and the time the patient comes to surgery. We must continue to see that our utilization committees are functioning, thus we will limit unnecessary admissions and prevent undue length of hospital stay.

We are interested in taking care of people who are sick; we are interested in preventing illnesses when it is possible. As an American Medical Profession, we resent those who have forced us into the realm of politics. We resent those who would misuse the health of our patients for Political purposes. We came into being as an Association in 1847 with two main purposes. To these purposes, we are still dedicated. They are to advance the art of science of medicine and to protect the public health.

The public must be informed that we physicians of this generation have seen and have been responsible for the greatest scientific medical advances in history. Because of the improved medical science, life expectancy in this country in the past 50 years has increased from about 45-47 years to 70-72 years. This has been due a great deal to preventive medicine; to the doctors who have improved themselves in treatment of patients. This has created the increase in longevity. In fact, we are the ones who are responsible for these people who live over 65. In fact, we have created our own Frankenstein. Because people live longer, Medicare has come into existence.

Yet the question arises. What is so magic about this number "65"? Why is it neces-

sary that because of a birthday—because of age 65—suddenly that individual becomes indigent, becomes sick, becomes needy and has to be helped by government aid. I am sure you and I know many people 65 and over who are well able to take care of themselves—who have much more money than many of us—who should not be under Medicare. Many of these people, before this law became effective, had insurance of their own. As I understand it, over 10 million policies have been cancelled out because of this new law.

Why wasn't the public made aware of the fact that there is a law called the "Kerr-Mills" law which has been in effect now for quite a few years; why wasn't the public made to understand this law; why weren't they informed and educated and explained as to what this law provides. This law, the Kerr-Mills law, was designed to take care of two classes of our senior citizens—first, those on old age assistance for whom we provide food, clothing and shelter; the other, the second part, was designed for people who provide for themselves the necessities of life, who may own their own home with no mortgage, designed to see that if and when these people need help, they need not put a mortgage on their home, or exhaust their life savings, or borrow against their automobile or personal belongings, or borrow from the bank against an income so limited that they cannot pay it back.

This part of Kerr-Mills is operating to date in 36 states and four territories, and last year and several years ago, they did a remarkable job and spent an excess of \$350,000,000 specifically for people not on relief, providing for their health care. But administration spokesmen continued to say, "It will never work"—"it is only working in a handful of states"—"it is only working in half the states."

You and I know the reason why Medicare has become a law. It was passed by the administration because it was used as a political football to bring into line many

(Continued on page 356)



Most of my patients with high blood pressure are as old as I am. A lot of them are living on pensions. They're grateful when I can keep prescription costs down.

Regroton®

chlorthalidone 50 mg. reserpine 0.25 mg.

**1 tablet daily
brings pressure down**

Advantage: Both components of Regroton are long-acting.

Average dosage: One tablet daily with breakfast.

Contraindications: History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases.

Warning: With administration of enteric-coated potassium supplements, the possibility of small bowel lesions should be kept in mind. Discontinue 2 weeks before general anesthesia, 1 week before electroshock therapy, and if depression or peptic ulcer occurs.

Precautions: Reduce dosage of concomitant antihypertensive agents by one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take particular care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. Use with caution in patients with ulcerative colitis, gallstones, or bronchial asthma.

Side effects: Nausea, vomiting, diarrhea, muscle cramps, headaches and dizziness. Potential side effects include angina pectoris, anxiety, depression, drowsiness, hyperglycemia, hyperuricemia, lassitude, leukopenia, nasal stuffiness, nightmare, purpura, urticaria, and weakness.

For full details, see the complete prescribing information.

Availability: Bottles of 100 and 1000 tablets.

Geigy

THE PRESIDENT'S PAGE (Continued from page 354)

areas and many of the congressmen to increase the majority of the party in the congress, as it is today.

I am not so sure that this Medicare law is going to be effective in taking care of those people who need actual care. I am concerned about the fact that many of these people will take advantage of what they call a "give away program." They will insist that their doctors take them into the hospital because they are now entitled to this care under the law. Doctors must use their judgment, they must select the patients that are admitted into the hospital under Medicare, and they must try to help to avoid overerowding in the hospital; the lay people must help the doctors, not to pressurize them and not to force them into doing things that will be harmful to the public and to the Medical profession.

Because the medical profession has op-

posed this bill, our image has been greatly distorted by those who are forcing socialistic schemes upon the profession and the public. We have been accused of being money grubbers," selfish individuals, only concerned about our own welfare and not taking into consideration the public. The public must be informed that this is not true—that we are a lofty and honorable profession, giving of our time and effort, regardless of pay, to the welfare of the sick and needy.

We must understand this problem and we must study this carefully. We are going to try to do many things that will change this law, and the only way we can do this is by uniting in political fashion to elect representatives, to elect congressmen, to elect senators who will see our way and who will understand the right way, who will change this law in time to come.

MANUSCRIPT INFORMATION

Original articles will be considered for publication with the understanding that they are contributed only to the *Illinois Medical Journal*. The *Journal* assumes no responsibility for the opinions and claims expressed in the articles contributed.

Manuscripts should be typed double space and submitted in duplicate, one original and one carbon. An article should not exceed 12 to 16 pages, briefer if possible.

References should be numbered and conform to the following style in the order given: name of author, title of article, name of periodical with volume, page, month (day of month, if weekly) and year. The *Journal* does not assume responsibility for the accuracy of references used with articles.

The first page should list the title, the name of the author(s), degrees and any institutional or other credits. The title should be as short as possible. Pages should be numbered consecutively. Tables are to be typed, numbered and accompanied by a brief descriptive title. Make drawings and charts in black ink. If photographs are submitted, send black and white glossies. Number illustrations consecutively and indicate their place in the text. Number, indicate the top and place the author's name on the back of each illustration.

Address manuscripts to: T. R. Van Dellen, M.D., Editor, *Illinois Medical Journal*, 360 North Michigan Avenue, Chicago, Illinois 60601.

Mediatric®

Designed for the “metabolically spent”

Nutritional reinforcement for those who can't
—or won't—eat properly...balanced amounts of
estrogen and androgen to counteract declining
gonadal hormone secretion and its sequelae of
premature degenerative changes...mild
antidepressant for a gentle “mood” uplift...

The estrogen component in MEDIATRIC is
PREMARIN® (conjugated estrogens-equine), the
natural estrogen most widely prescribed for its
superior physiologic and metabolic benefits.

MEDIATRIC also provides *nutritional reinforcement—blood-building factors and vitamin supplementation*. It contributes a gentle “mood” uplift
through methamphetamine HCl.

Three different dosage forms—Liquid, Tablets, and
Capsules—offer convenience and variety.

MEDIATRIC Liquid

Each 15 cc. (3 teaspoonfuls) contains:

*Conjugated estrogens—equine (Premarin®)	0.25 mg.
Methyltestosterone	2.5 mg.
Thiamine HCl	5.0 mg.
Cyanocobalamin	1.5 mcg.
Methamphetamine HCl	1.0 mg.

Contains 15% alcohol

MEDIATRIC Tablets and Capsules

Each MEDIATRIC Tablet or Capsule contains:

*Conjugated estrogens—equine (Premarin®)	0.25 mg.
Methyltestosterone	2.5 mg.
Ascorbic acid	100.0 mg.
Cyanocobalamin	2.5 mcg.
Intrinsic factor concentrate	8.0 mg.
Thiamine mononitrate	10.0 mg.
Riboflavin	5.0 mg.
Niacinamide	50.0 mg.
Pyridoxine HCl	3.0 mg.
Calc. pantothenate	20.0 mg.
Ferrous sulfate exsic	30.0 mg.
Methamphetamine HCl	1.0 mg.

*Orally active, water-soluble conjugated estrogens derived from
pregnant mares' urine and standardized in terms of the weight
of active, water-soluble estrogen content.

MEDIATRIC helps keep the older patient alert and active;
helps relieve general malaise, easy fatigability, vague pains in
the bones and joints, loss of appetite, and lack of interest
usually associated with declining gonadal hormone secretion.

CONTRAINDICATION: Carcinoma of the prostate, due to methyl-
testosterone component.

WARNING: Some patients with pernicious anemia may not
respond to treatment with the Tablets or Capsules, nor is
cessation of response predictable. Periodic examinations and
laboratory studies of pernicious anemia patients are essential
and recommended.

SIDE EFFECTS: In addition to withdrawal bleeding, breast ten-
derness or hirsutism may occur.

SUGGESTED DOSAGES: *Male and female*: 3 teaspoonfuls of
Liquid, 1 Tablet, or 1 Capsule, daily or as required.

In the female: To avoid continuous stimulation of breast and
uterus, cyclic therapy is recommended (3 week regimen with
1 week rest period—Withdrawal bleeding may occur during
this 1 week rest period).

In the male: A careful check should be made on the status
of the prostate gland when therapy is given for protracted
intervals.

SUPPLIED: No. 910 — MEDIATRIC Liquid, in bottles of 16
fluidounces and 1 gallon. No. 752 — MEDIATRIC Tablets,
in bottles of 100 and 1,000. No. 252 — MEDIATRIC Cap-
sules, in bottles of 30, 100, and 1,000.



Mediatric®
steroid-nutritional compound



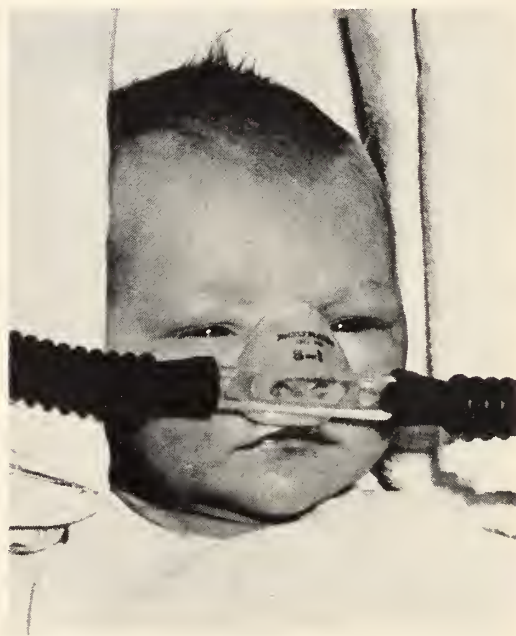
AYERST LABORATORIES, NEW YORK, N. Y. 10017 • Montreal, Canada



Rx Reviews

and New Products

Infant Nasal Mask

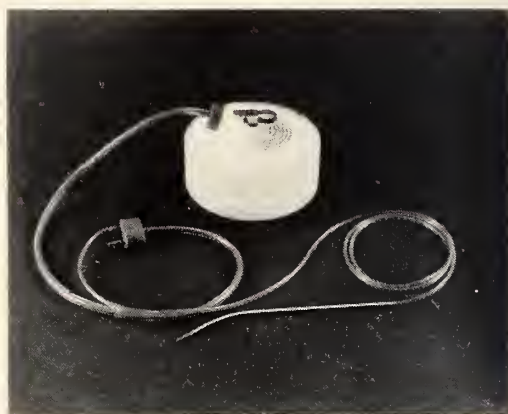


Extremely compact nasal masks—designed specifically for treatment of respiratory distress in newborns and premature infants—have been developed by the Life System Group of Bourns, Inc. They have been clinically evaluated and are now available in a kit (Model LS-106), which contains a set of five masks and all materials needed to fit a mask simply and quickly to the smallest premature infant or full-size newborn.

Because of their compact design, these infant masks provide a dead space of 0.5cc or less. In addition, the infant's mouth remains unencumbered for ready access and treatment. Nasal openings can be clearly viewed. No material or tubing extends into the nostril or in any way restricts the air passage.

Each mask can be fitted to the infant's face in less than fifteen minutes without extensive training of personnel. Masks have remained applied for 120-hour periods with no apparent patient discomfort. For additional information about the Bourns Infant Nasal Mask Kit, write Bourns, Inc., Life Systems, 300 Airport Road, Ames, Iowa.

Compact Suction Unit



AUSTE-VAC®, a pre-sterilized, disposable wound suction unit which sells for \$9.95 complete, has been announced by the Austenal Medical Division, Howmet Corporation. The low price, which is said to be substantially below that of competitive items, should permit the use of such apparatus in practically all surgical procedures requiring wound drainage.

Unique, functional packaging of the unit results in the surgical team having component parts laid out on a molded, pre-sterilized tray when the sterile packaging is removed. Each part has been developed

(continued on page 363)

INDOCIN®

INDOMETHACIN

Indications: Chronic and acute rheumatoid arthritis, rheumatoid (ankylosing) spondylitis, degenerative joint disease (osteoarthritis) of the hip, and gout.

Contraindications: Active peptic ulcer, gastritis, regional enteritis, or ulcerative colitis. Safety in pregnancy has not been established. Not recommended for pediatric age groups.

Warning: Patients who experience dizziness, lightheadedness, or feelings of detachment on INDOCIN should be cautioned against operating motor vehicles, machinery, climbing ladders, etc. Use cautiously in patients with psychiatric disturbances, epilepsy, or parkinsonism.

Precautions and Adverse Reactions: Most commonly, headache, dizziness, lightheadedness, G.I. disturbances. The C.N.S. effects are often transient and frequently disappear with continued treatment or reduced dosage. The severity of these effects may occasionally require cessation of therapy. G.I. effects may be minimized by giving the drug with food or with antacids or immediately after meals. Ulceration of the stomach, duodenum, or small intestine has been reported and, in a few instances, severe bleeding with perforation and death. Gastrointestinal bleeding with no obvious ulcer formation has also been noted; INDOCIN should be discontinued if G.I. bleeding occurs. As a result of G.I. bleeding, some patients may manifest anemia, and for this reason periodic hemoglobin determinations are recommended. Rare reports of effects not definitely known to be attributable to INDOCIN include bleeding from the sigmoid colon (either from a diverticulum or without a known previous pathologic condition), perforation of preexisting sigmoid lesions (diverticulum, carcinoma), and hematuria. In other rare cases, a diagnosis of gastritis has been made while the drug was being given. One patient developed ulcerative colitis, and another, regional ileitis, while receiving INDOCIN; when the drug was given to patients with preexisting ulcerative colitis, there was an increase in abdominal pain. Infrequently observed side effects may include drowsiness, tinnitus, mental confusion, depression and other psychic disturbances, blurred vision, stomatitis, pruritus, edema, and hypersensitivity reactions. Slight BUN elevation, usually transient, has been seen in some patients, although the preponderance of evidence indicates that INDOCIN does not adversely affect renal function, even in patients with preexisting renal disease. Nevertheless, renal function should be checked periodically in patients on long-term therapy. Leukopenia has been seen in a few patients. Transient elevations in alkaline phosphatase, cephalin-cholesterol flocculation, and thymol turbidity tests have been observed in some patients and, rarely, elevations of SGOT values; the relationship of these changes to the drug, if any, has not been established. As with any new drug, patients should be followed carefully to detect unusual manifestations of drug sensitivity. Before prescribing or administering, read product circular with package or available on request.

NEW PRODUCTS

(continued from page 360)

with high reliability and ease of use as guiding criteria.

The Wound Tubing is radio-opaque marked to facilitate placement within the wound site. It is made from a medical grade of tubing such as that used in cardiovascular surgery. The drainage apertures are larger and more closely spaced than normal and extend along a full 12" length of the tubing. In spite of more and larger perforations the tubing will not collapse, under normal use, according to the manufacturer.

All tubing connections on the pump, reducing connector or needle, are made by slipping the tubing over a fitting, rather than pressing into a fitting. This change in design of tubing connections permits faster and easier assembly of the unit, with minimum chance of leakage.

Descriptive literature is available from Austenal Medical Division, Howmet Corporation, 224 East 39th Street, New York, N. Y. 10016.

Burn Treatment

A new technique for treating burns has doubled the survival rate for "persons burned over as much as 60 per cent of their bodies," according to the director of the Sumner L. Koch Burn Unit at Chicago's Cook County Hospital, one of the leading burn centers in the country.

Not only have deaths from burn wounds been dramatically reduced, length of hospitalization "has been cut by more than half," reports Koch Burn Unit director Dr. John A. Boswick, Jr. In the July 18 issue of NEWSWEEK Magazine, he describes results of treating 370 seriously-burned patients in 1965 with the new technique.

First step was to apply in cream form the sulfa drug Sulfamylon which, by curbing infection "also helps promote healing," the article quotes Dr. Boswick as saying. Sulfamylon was washed off with a mild saline solution and reapplied two or three times daily. Very seriously burned victims were placed in tubs filled with the saline solution, after which dead tissue was removed with forceps.

Next treatment measure consisted of lay-

(continued on page 370)

THE VIEW BOX

DIAGNOSIS AND DISCUSSION

(Continued from page 343)



FIGURE 2

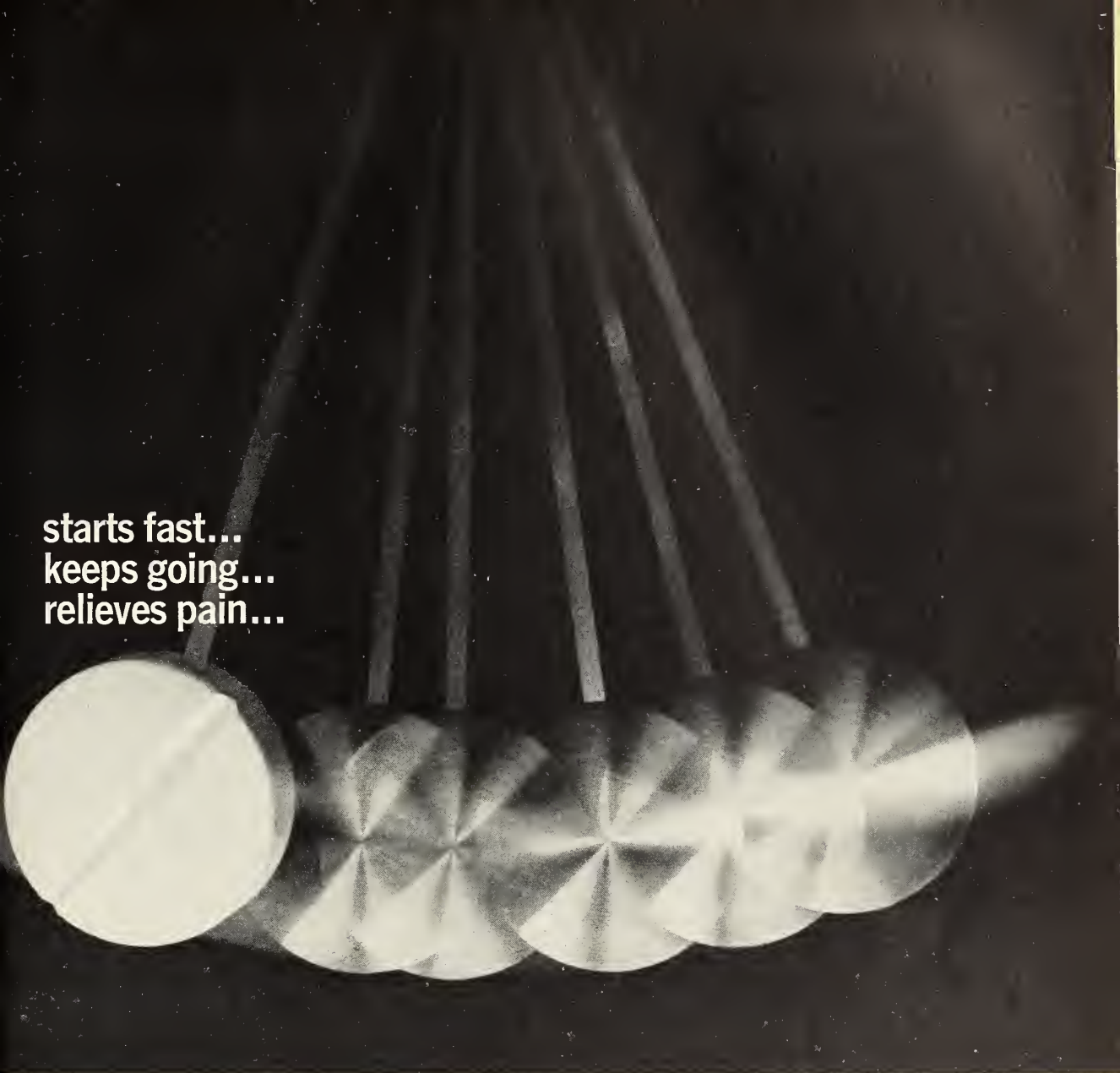


FIGURE 3

If you have observed in the PA chest a deviation of the trachea to the right at the level of the aortic arch (Fig. 1) and an air fluid level in a dilated esophagus anterior to the third dorsal segment in the lateral film (Fig. 2), you would then proceed with a barium swallow. This demonstrates a constricting lesion at the junction of the upper and middle thirds of the esophagus (Fig. 3).



In diagnostic roentgenology many important findings are picked up on evidence as difficult to find as it is in this case. Frequently patients are referred to the radiologist without a history on the X-ray requisition, so that one must always be on the lookout for identifiable pathology.

Dilatation of the esophagus above a carcinoma is a much more frequent occurrence at the Cook County Hospital than is reported in standard publications on the subject.



starts fast...
keeps going...
relieves pain...

effective pain relief within 15 minutes...lasts 6 hours or more

 PERCODAN relieves pain fast—usually within 15 minutes—and for prolonged periods, usually for 6 hours or more. Further, its speed and potency are *predictable* in the wide middle range of pain.  PERCODAN is well tolerated and rarely causes constipation. **Usual Adult Dose:** 1 tablet every 6 hours. **Precautions:** The habit-forming potentialities of Percodan are somewhat less than those of morphine and somewhat greater than those of codeine. The usual precautions should be observed as with other opiate analgesics. Although

generally well tolerated, Percodan may cause nausea, emesis or constipation in some patients. Percodan should be used with caution in patients with known idiosyncrasies to aspirin or phenacetin, and in those with blood dyscrasias. *Literature on request.*

PERCODAN[®]

Each scored yellow Percodan Tablet contains 4.50 mg. oxycodone HCl (Warning: May be habit-forming), 0.38 mg. oxycodone terephthalate (Warning: May be habit-forming), 0.38 mg. homatropine terephthalate, 224 mg. aspirin, 160 mg. phenacetin, and 32 mg. caffeine. U. S. Pats. 2,628,185 and 2,907,768

ENDO LABORATORIES INC., Garden City, New York


Endo[®]

NEW PRODUCTS

(continued from page 363)

ing three to four-inch square homograft patches on the burned areas to preserve vital body fluids, reduce pain and avoid use of narcotics.

New homografts were applied every two or three days following removal of dead tissue, Dr. Boswick states, noting that the skin grafts stimulated growth of the patients' own skin.

"The use of homografts has reduced the need for permanent grafts of skin from the patient's own body by two-thirds," Dr. Boswick states in the magazine article.

He hopes that synthetic material will be developed to promote healing even faster than homografts.

In a recent issue of the A.M.A.'s *Archives of Surgery* (92:58, 1966), a team of military surgeons at Ft. Sam Houston credit Sulfamylon with almost completely ending deaths from burn wounds when 40 per cent or less of the body area is burned. A water-soluble ointment of Sulfamylon (mafenide hydrochloride) was used, according to the team whose senior investigator was Colonel John A. Moncrief.

Sulfamylon is supplied by Winthrop Laboratories. Its use in treating burns is being studied clinically prior to seeking approval of the Food and Drug Administration for general distribution to the medical profession.

Carcinoma Management

Progestational agents are the most useful drugs in management of metastatic endometrial cancer and appear to be of greatest benefit where the disease is of long duration and slow growth.

This assessment was made by a clinician who has used two different agents to treat 34 patients. Of 14 patients receiving

medroxyprogesterone acetate (Provera), five (36%) had good, objective remissions consisting of improvement in lung, pelvic, and abdominal metastases. Similar results were achieved in five out of 25 patients (20%) who received hydroxyprogesterone caproate (Delalutin), according to Dr. Marguerite P. Sykes of the Sloan-Kettering Institute and Cornell University Medical College, New York.

Lesions of the lung respond better than any other type of metastases. Bone, and especially liver metastases, are considerably more resistant to progestational therapy, Dr. Sykes reports in *Medical Clinics of North America*.*

She gave this breakdown of results:

Provera—2 patients died before receiving adequate therapy, 1 lost to follow-up, 4 treatment failures, 1 subjective remission, 1 subjective and objective remission of less than a month, 5 good objective remissions. Three of the latter had also responded to Delalutin.

Delalutin—3 lost to follow-up, 8 died before receiving adequate therapy, 4 treatment failures, 1 subjective improvement, 1 showed no progression of disease during treatment, 1 subjective and objective improvement of less than a month, 1 progression in one area and decrease in another, 5 remissions including marked clearing to disappearance of lung infiltrations.

Dr. Sykes said Provera is given for 10 weeks in dosages of 400 to 800 mg.—daily if by the oral route and weekly if by intramuscular injection (Depo-Provera).

She recommends a dosage of 1000 mg. of Delalutin, intramuscularly twice weekly for at least 10 weeks for metastases to lung and bone, and 1500 mg. twice weekly for pelvic and abdominal metastases, which she believes are more resistant to therapy.

* (50:833-844, May 1966)

NEW PHARMACEUTICAL SPECIALTIES

by Paul deHaen

For detailed information regarding indications, dosage, contraindications and adverse reactions, refer to the manufacturer's package insert or brochure.

Single Chemicals — Drugs not previously known, including new salts.

Duplicate Single Products—Drugs marketed by more than one manufacturer.

Combination Products—Consisting of two or more active ingredients.

New Dosage Forms—Of a previously introduced product.

NEW SINGLE CHEMICALS

VERCYTE Cancer Chemotherapy R

Manufacturer: Abbott Laboratories

Nonproprietary Name: Pipobroman

Indications: Primary: Polycythemia vera. Also found to be useful in the treatment of chronic granulocytic leukemia. Drug classified as alkylating agent.

Not recommended for children under 15 or for use during pregnancy. Not to be administered to patients with bone marrow depression.

Dosage: Orally in divided daily doses. Maintenance adjusted to response of the patient.

Polycythemia vera: Initial—1 mg./kg./day.

Maintenance—0.1 to 0.2 mg./kg./day.

Chronic granulocytic leukemia:

Initial—1.5 to 2.5 mg./kg./day.

Maintenance—7 mg. daily (50 mg. weekly) to 175 mg. daily.

Supplied as: Tablets 10 mg. and 25 mg.; Bottles of 100.

DUPLICATE SINGLE PRODUCTS

RENASUL Sulfonamide R

Manufacturer: Carrtane Laboratories, Inc.

Nonproprietary Name: Sulfamethizole

Indications: Urinary tract infections: cystitis, urethritis, pyelitis, pyelonephritis and prostatitis. Also found effective against *Proteus*

vulgaris, *Pseudomonas aeruginosa*, *E. coli*, *S. fecalis*, *E. intermedium* and *A. aerogenes*.

Dosage: One or two tablets, 3 to 4 times daily.

Supplied as: Tablets 0.5 Gm.; Bottles of 100 and 1,000.

COMBINATION PRODUCTS

ALGESIN-C Antiarthritic (non-hormonal) R

Manufacturer: The Vale Chemical Co., Inc.

Composition:

Sodium Butabarbital 10 mg.

Acetaminophen 200 mg.

Mephenesin 200 mg.

Salicylamide 200 mg.

Ascorbic Acid 20 mg.

Indications: Symptomatic relief of pain, muscle tension or muscle spasm, associated with arthritic and rheumatic conditions, neuralgias and low back pain.

Dosage: Adults: One or two tablets 4 times daily.

Children: (over 6 years) $\frac{1}{2}$ to 1 tablet 4 times daily.

Supplied as: Tablets. Bottles of 100, 500 and 1,000.

NEOSPECT Bronchial Dilator R

Manufacturer: Lemmon Pharmacal Company

Composition:

Dyphylline 100 mg.

Ephedrine Sulfate 25 mg.

Phenobarbital 15 mg.

Glyceryl Guaiacolate 100 mg.

Indications: Relief or prevention of the symptoms of bronchial asthma, asthmatic bronchitis, acute and chronic bronchitis, hay fever, emphysema and other conditions in which bronchospasm and respiratory congestion are dominant symptoms.

Dosage: Adults: One tablet at first indication of attack. One or two tablets every 4 hours for prevention of recurrence.

One tablet at bedtime for prevention of nocturnal attacks.

Children: (over 6) one-half the adult dose.

Supplied as: Tablets. Bottles of 100 and 1,000.

PEDIALYTE Hospital Solution R

Manufacturer: Ross Laboratories

Composition:

Sodium 30 mEq/liter

Potassium 20 mEq/liter

Calcium 4 mEq/liter

Magnesium 4 mEq/liter

Chloride 30 mEq/liter

(Continued on page 372)

COMBINATION PRODUCTS

(Continued)

Lactate28 mEq/liter
Dextrose50 Gm./liter
Caloric content: 6 cal/fl. oz. (from dextrose)

Indications: Oral administration of required fluid and electrolytes to infants and children; in mild or moderate diarrhea, vomiting and following surgical procedures and conditions with excessive fluid loss or deficient intake.

Dosage: Based on clinical estimation of patient's requirement. Varies with age, weight, and degree of dehydration.

Supplied as: Solution. Eight ounce disposable nursing bottle.

RENASUL A Antibacterial Urinary R

Manufacturer: Carrtone Laboratories, Inc.

Composition:

Sulfamethizole0.5 Gm.
Phenazopyridine HCl.0.05 Gm.

Indications: Acute urinary tract infections amenable to sulfonamide therapy, prior to and following genitourinary surgery and instrumentation.

Dosage: Adults: 2 capsules 4 times daily.

Children: (9-12 years) 1 capsule 4 times daily.

Supplied as: Capsules. Bottles of 100 and 1,000.

RENASUL MM Antibacterial Urinary R

Manufacturer: Carrtone Laboratories, Inc.

Composition:

Sulphamethizole0.25 Gm.
Methenamine Mandelate0.25 Gm.

Indications: Acute urinary tract infections amenable to sulfonamide therapy, prior to and following genitourinary surgery and instrumentation.

Dosage: Adults: 2 capsules 4 times daily.

Children: (9-12 years) 1 capsule 4 times daily.

Supplied as: Capsules. Bottles of 100 and 1,000.

STEROFRIN Eye Preparation R

Manufacturer: Alcon Laboratories, Inc.

Composition: Ophthalmic suspension:

*Prednisolone0.25%
Phenylephrine HCl.0.12%
Hydroxypropyl methylcellulose
(4000 cps)0.5 %

In a base of boric acid, polysorbate 80, urea and distilled water.

*In microfine suspension.

Indications: Inflammatory and allergic conditions of the eye.

Dosage: Topically: 2 drops in the eye(s) 4 times daily.

Supplied as: Drop dispensers 5 cc.

TRISOHIST Cold Preparation—General R

Manufacturer: Broemmel Pharmaceuticals

Composition:

Chlorpheniramine maleate8 mg.
Phenylephrine HCl.20 mg.
Methscopolamine nitrate2.5 mg.

Indications: Common cold, hay fever and seasonal allergic conditions.

Dosage: One capsule every 10 to 12 hours.

Supplied as: Timed-release capsules. Bottles of 50 and 250.

NEW DOSAGE FORMS

RENASUL SUSPENSION Sulfonamide R

Manufacturer: Carrtone Laboratories, Inc.

Nonproprietary Name: Sulfamethizole

Indications: Urinary tract infections: cystitis, urethritis, pyelitis, pyelonephritis and prostatitis. Also found effective against *Proteus vulgaris*, *Pseudomonas aeruginosa*, *E. coli*, *E. fecalis*, *E. intermedium* and *A. aerogenes*.

Dosage: One or two teaspoonfuls 3 or 4 times daily.

Supplied as: Suspension 0.25 Gm./5 cc. Bottles of 16 oz.

TETREX bidCAPS Antibiotic Broad & Medium Spectrum R

Manufacturer: Bristol Laboratories

Nonproprietary Name: Tetracycline phosphate complex

Composition: Each capsule contains tetracycline phosphate complex, equivalent to 500 mg. of tetracycline HCl. activity.

Indications: Infections of respiratory, gastrointestinal and genitourinary tracts. Also skin and soft tissue infections due to tetracycline-sensitive organisms.

Dosage: One capsule twice a day.

Supplied as: Capsules. Bottles of 16 and 50.

TUBEX THIAMINE

HYDROCHLORIDE Vitamin R

Manufacturer: Wyeth Laboratories

Nonproprietary Name: Thiamine Hydrochloride Injection

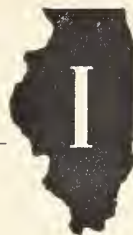
Composition: 1 cc.:

Thiamine HCl.100 mg.

Indications: Treatment and prophylaxis of thiamine deficiency.

Dosage: 25 mg. to 100 mg. intracutaneously or intravenously.

Supplied as: Sterile tubex cartridge-needle unit. 1 cc. (22 g. x 1¼").



Appointments



Dr. Siegel

Dr. Irving Siegel, 5054 North St. Louis, has been appointed assistant chairman, department of obstetrics and gynecology of the Mount Sinai Hospital Medical Center. The announcement was made by Nathan W. Helman, executive vice president of the medical center. Dr. Siegel also holds the rank of Clinical Associate Professor, Obstetrics and Gynecology at The Chicago Medical School.

Dr. Siegel, a member of Mount Sinai's staff since 1947, received his B.S. and M.D. degrees from the University of Illinois College of Medicine. His internship was spent at Cook County Hospital and his residency at Woman's Hospital, Detroit, and Chicago's Lying-In Hospital.

The National Association of Hearing and Speech Agencies, NAHSA (formerly the American Hearing Society), announced the appointment of a new executive director at its annual meeting in San Francisco. Tom Coleman, who had previously served NAHSA as a consultant, and then later as the acting director, has been retained as the executive director.

Mr. Coleman comes to NAHSA with an extensive background of consultative and administrative experiences. As president of his own firm, Capitol Consultants, Inc., he has undertaken special projects for several institutes and divisions of the National Institutes of Health; Public Health Service; Washington Hospital Center; Gallaudet College; World Health Organization; as well as other hospitals, medical schools, health agencies and institutions. He also served Dr. Jonas E. Salk during the development of the polio vaccine.

After graduating from George Washington University, Washington, D.C., Mr. Coleman became a member of the G. W. public relations staff. From there he moved on to Nebraska as Director of Development and Public Relations, University of Nebraska Medical Center. He later became Assistant to the Vice Chancellor of the University of Pittsburgh Medical Center; and still later, Assistant Director of the Association of American Medical Colleges.

Mr. Coleman's continuous concentration of effort in the health field as a consultant, planner, writer, communications expert and troubleshooter qualify him to bring a new kind of leadership to NAHSA.

The National Association of Hearing and Speech Agencies, (which received its new name on July 1 of this year), is a federation of 160 member agencies throughout the United States.

(continued on page 377)

Meeting Memos



The American College of Physicians (ACP), whose 13,000 members are specialists in internal medicine or in closely related fields, will sponsor 20 postgraduate courses during the coming academic year.

The courses run from three to five days and are held in cooperation with medical schools and teaching institutions throughout the United States. The concentrated courses are aimed at providing practicing physicians with formal instruction in new developments affecting the diagnosis and treatment of diseases. The courses are part of the College's continuing education program to help internists keep their medical knowledge and skills current.

Edward C. Rosenow, Jr., M.D., Executive Director of the College, said more than 1,000 medical specialists are expected to enroll in the 1966-67 courses. The courses have been offered annually since 1938 and have helped more than 22,000 practicing physicians keep abreast of new medical and scientific knowledge.

The 1966-67 courses will range over a broad selection of subjects related to the practice of internal medicine. These include advances in cutaneous medicine, psychiatry for the internist, newer aspects of allergy and individual courses on current concepts in the treatment of major diseases.

The courses are open to all physicians. However, in each case enrollment is limited—and priority given to members of the American College of Physicians. Tuition fees are \$60 for ACP members; \$100 for non-members.

The 1966-67 courses, their locations and their directors are:

Sept. 28-Oct. 1 *Advances in Cutaneous Medicine*, Mayo Graduate School of Medicine, University of Minnesota, Rochester, Minn.; R. K. Winkelmann, M.D., Director.

Oct. 3-7: *The Care of the Critically Ill Medical Patient*, State University of New

York College of Medicine, Syracuse, N. Y.; Richard H. Lyons, M.D., Director.

Nov. 7-11: *Endocrine and Metabolic Disorders*, The State University of New York, Downstate Medical Center, Brooklyn, N. Y.; David M. Kydd, M.D. and Stanley L. Wallace, M.D., Co-directors.

Nov. 14-18: *Newer Aspects of Experimental and Clinical Allergy*, Harvard University Medical School, Boston, Mass.; Francis C. Lowell, M.D. Director.

Nov. 28-Dec. 2: *Progress in Gastroenterology*, University of Pennsylvania School of Medicine, Philadelphia, Pa.; Henry J. Tumen, M.D., Director

Dec. 5-9: *What the Internist Should Know About Cancer*, College of Physicians and Surgeons of Columbia University, New York, N. Y., Alfred Gellhorn, M.D. and John E. Ulmann, M.D., Co-directors.

Dec. 14-17: *Infectious Diseases*, University of Pittsburgh School of Medicine and Medical Center, Pittsburgh, Pa.; A. I. Braude, M.D., Director.

Jan. 16-20: *Basic Mechanisms of Renal Disease*, Cornell University Medical Center, New York, N. Y.; E. Lovell Becker, M.D. and George W. Frimpter, M.D., Co-directors.

Jan. 23-27: *Current Concepts in Blood Disease*, University of Miami School of Medicine, Miami Beach, Fla.; William J. Harrington, M.D., Director.

Feb. 6-10: *Biochemical Lesions in Internal Medicine*, Washington University School of Medicine, St. Louis, Mo.; Carl V. Moore, M.D., Sol Sherry, M.D. and William Daughaday, M.D., Co-directors.

Feb. 27-March 3: *Arthritis and Related Disorders*, New York University Medical Center, New York, N. Y.; Currier McEwen, M.D. and Edward F. Hartung, M.D., Co-directors.

March 6-10: *Recent Advances in Cardiovascular Disease*, The Mount Sinai Medical

Center New York, N. Y.; Charles K. Friedberg, M.D., Director.

March 13-17: *Physiological Aspects of Cardiopulmonary Disease*, Yale University-New Haven Medical Center, New Haven, Conn.; Frank D. Gray, M.D., Director.

March 20-24: *Fundamental Concepts of Gastroenterology*, University of Michigan Medical Center, Ann Arbor, Mich.; H. M. Pollard, M.D., Director.

March 27-31: *Psychiatry for the Internist*, Wayne State University School of Medicine, Detroit, Mich.; Paul Lowinger, M.D., Director.

May 8-12: *Clinical Auscultation of the Heart*, Georgetown University School of Medicine, Washington, D.C.; W. Proctor Harvey, M.D., Director.

May 15-19: *Recent Advances in Clinical Endocrinology*, University of Washington School of Medicine, Seattle, Wash.; Robert H. Williams, M.D., Director.

May 22-26: *Clinical Applications of Recent Advances in Electrophysiology of the Heart*, New York University School of Medicine and Medical Center, New York, N. Y.; Charles E. Kossmann, M.D., Director.

June 12-16: *Internal Medicine: Current Physiological Concepts in Diagnosis and Treatment*, University of Cincinnati College of Medicine, Cincinnati, Ohio; Richard W. Vilter, M.D., Director.

June 19-21: *Clinical Applications—Recent Advances in Pharmacology*, The State University of Iowa College of Medicine, Iowa City, Iowa; William B. Bean, M.D., Director.

October 10-14

CHICAGO—The largest meeting of surgeons in the world, the 52nd annual Clinical Congress of the American College of Surgeons, will be held in San Francisco, Oct. 10-14.

Every phase of surgery will be presented during the five-day program through 261 research-in-progress reports, nine post-graduate courses, 42 panel discussions in general surgery and surgical specialities, 107 medical films, 14 operative telecasts from Palo Alto-Stanford Hospital, and 425 scientific and industrial exhibits. Approximately 1,100 doctors will be participants in the program.

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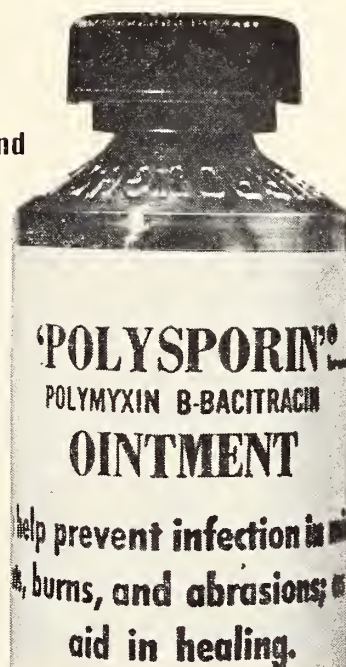
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OF RENAL DISEASES**

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from 9:00 am - 5:00 pm

GUEST SPEAKERS

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Manchester Royal Infirmary
Manchester, England

Dr. Priscilla Kincaid-Smith
Royal Melbourne Hospital
Melbourne, Victoria, Australia

Professor Malcolm D. Milne
Westminster Hospital Medical School
London, England

Professor H. D. De Wardener
Charing Cross Hospital Medical School
London, England

Dr. John T. Grayhack
Northwestern University Medical School
Chicago, Illinois

Professor Jean Hamburger
Clinique Des Maladies Metaboliques
Hopital Necker
Paris, France

TOPICS INCLUDE

"Disturbances of Renal Concentrating Mechanism"
"Medical and Surgical Aspects of Pyelonephritis"
"Chronic Dialysis and Renal Transplantation"
"Treatment of Chronic Renal Failure"
"Clinical Pharmacology of Diuretics"
"Drug Treatment of Renal Disease"
"Renal Disease in Pregnancy"

REGISTRATION FEE: \$15.00 including luncheon, refreshments and other services/\$6.00 for students, interns, residents, etc. on presentation of credentials.

Tickets now available from John Lane, Executive Director—Kidney Foundation of Illinois, Inc.—127 North Dearborn Street—Suite 701—Chicago, Illinois 60602.

**NORTHWESTERN MICROBIOLOGIST
WINS GERMAN PRIZE IN BLOOD
GROUP RESEARCH**

Georg F. Springer of Northwestern University's Medical School and Evanston Hospital has been awarded the Oehlecker Prize of the German Blood Transfusion Society for his research in blood groups substances.

The prize is the highest award in its field in Europe, and is presented every second or fourth year for outstanding research papers on blood group and blood transfusion.

Springer is director of the department of immunochemistry research at Evanston Hospital, and is professor of microbiology at Northwestern's Medical School.

His award winning paper is titled "The Relation of Microbes to Human Blood Group Substances." It will be published in English and German in the German Chemical Society's official journal, "Angewandte Chemie."

Experiments reported in the paper suggest that it is possible to modify or eliminate the severe and sometimes fatal reactions resulting when a person of one blood type (such as A, B or O) is given blood of another type. Blood group specific structures of small molecular size, isolated from bacteria, might be used toward this end, he wrote.

Major findings leading to this conclusion were:

1. Evidence that the formation of specific blood group antibodies responsible for severe transfusion reactions is caused by immunologic factors. Microbes in the body can trigger the reaction leading to formation of these antibodies. The conventional view had been that these antibodies were synthesized by genetic action.

2. Evidence that human blood group active substances are "apparently not confined to Man but occur as well in bacteria, viruses and higher plants," he said.

Springer's research, which began 15 years ago, is supported by grants from the National Science Foundation, the National Institutes of Health, the American Heart Association and the U.S. Atomic Energy Commission. His immunochemistry laboratory at Evanston Hospital was built with funds given by W. Clement Stone.

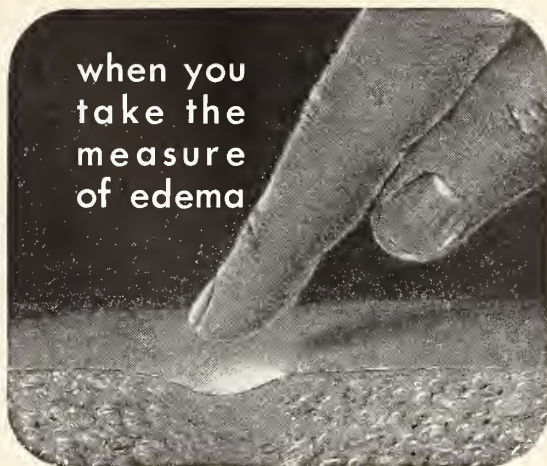
NEWS and ANNOUNCEMENTS

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Crippled Children's Clinics for October:

- October 4 Quincy—Blessing Hospital
- October 5 Carrollton — Boyd Memorial Hospital
- October 5 Rock Island Cerebral Palsy—Foss Home, 3808 Eighth Avenue
- October 5 Hinsdale—Hinsdale Sanitarium
- October 6 Flora—Clay County Hospital
- October 6 Cairo—Public Health Building
- October 6 Lake County Cardiac—Victory Memorial Hospital
- October 11 Peoria General — Children's Hospital
- October 11 East St. Louis—St. Mary's Hospital
- October 12 Champaign - Urbana — McKinley Hospital
- October 13 Springfield General — St. John's Hospital
- October 14 Chicago Heights Cardiac—St. James Hospital
- October 14 Evanston—St. Francis Hospital
- October 18 Belleville — St. Elizabeth's Hospital
- October 19 Springfield Cerebral Palsy (P.M.)—Memorial Hospital
- October 19 Aurora — Copley Memorial Hospital
- October 19 Chicago Heights General—St. James Hospital
- October 19 Mt. Vernon—Good Samaritan Hospital
- October 20 Effingham Rheumatic Fever & Cardiac—St. Anthony Memorial Hospital
- October 20 Rockford—St. Anthony's Hospital
- October 20 Bloomington — St. Joseph's Hospital
- October 20 Elmhurst Cardiac—Memorial Hospital of DuPage County
- October 25 Peoria General — Children's Hospital
- October 28 Chicago Heights Cardiac—St. James Hospital

(continued on page 378)



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AQUATAG (Benzthiazide) is a potent, orally active, nonmercurial, diuretic agent. It is effective orally in producing diuresis in edema states, where it is therapeutically comparable to mercurials given parenterally. AQUATAG (Benzthiazide) is mildly antihypertensive in its own right and enhances the action of other antihypertensive drugs when used in combination.

DIURETIC ACTION: Clinically, the oral administration of AQUATAG (benzthiazide) results in diuretic activity within two hours with maximal natriuretic, chloruretic, and diuretic effects occurring during the fourth, fifth and sixth hours. Maintenance of response continues for approximately 12 to 18 hours. Acidosis is an unlikely complication since therapeutic doses of AQUATAG (benzthiazide) do not appreciably increase bicarbonate excretion. Edematous patients receiving 50 mg. of AQUATAG (benzthiazide) daily for five days developed a maximal increase in the rate of sodium excretion on the first day, and maintained this high rate until depletion of excessive body stores of sodium. In congestive heart-failure patients, AQUATAG (benzthiazide) produced the same weight loss, during a 48-hour treatment period as did a maximally effective dose of hydrochlorothiazide.

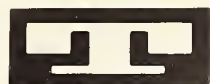
DOSAGE: Diuresis, initially 50 to 200 mg.; maintenance 25 to 150 mg., daily. Hypertension 50 to 100 mg. initially, adjusted to 50 mg. t.i.d. or downward to minimal effective dosage level.

WARNINGS: Use with caution in the presence of renal disease as azotemia may be precipitated or increased. In patients with advanced hepatic disease, electrolyte imbalance may result in hepatic coma. Dosage of coadministered antihypertensive agents should be reduced by at least 50%. In cases of suspected electrolyte imbalance, serum electrolyte determinations should be performed and imbalance, if any, corrected. Stenosis or ulcer of small intestine have been reported with coated potassium formulas, and surgery has been required and deaths have occurred. Based on surveys of both United States and foreign physicians, incidence of these lesions is low and a causal relationship in man has not been definitely established. Until further experience has been obtained, the use of the drug in pregnant patients should be weighed against possible hazards to the fetus.

CONTRAINDICATIONS: AQUATAG (benzthiazide) is contraindicated in progressive renal disease or dysfunction including increasing oliguria and azotemia. Continued administration of this drug is contraindicated in patients who show no response to its diuretic or antihypertensive properties. Severe hepatic disease is a relative contraindication. (See "Warnings" above.)

PRECAUTIONS AND SIDE EFFECTS: Electrolyte imbalance with hypokalemia (digitalis toxicity may be precipitated), hypochloremic alkalosis and hyponatremia may occur. Patients with cirrhosis should be observed for impending hepatic coma and hypokalemia. Other reactions may include blood dyscrasias, hyperuricemia and gout, nausea, jaundice, anorexia, vomiting, diarrhea, dizziness, paresthesia, photosensitivity and headache. Hepatic fetor, tremor, confusion and drowsiness are signs of impending pre coma and coma in patients with cirrhosis. Insulin requirements may be altered in diabetes. AQUATAG (benzthiazide) should be used with caution post-operatively as hypokalemia is not uncommon. Potassium supplementation may be advisable pre- and post-operatively. There have been occasional reports of thrombocytopenia, leukopenia, agranulocytosis, aplastic anemia and precipitation of acute pancreatitis or jaundice.

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SPECIALTY REVIEW COURSE IN SURGERY, Part I, November 7
 SPECIALTY REVIEW COURSE IN MEDICINE, Part I, Sept. 12 and 26
 SPECIALTY REVIEW COURSE IN PEDIATRICS, September 26
 PATHOLOGY REVIEW COURSES FOR SPECIALTIES, Request Dates
 SURGERY OF STOMACH & DUODENUM, One Week, September 19
 PRINCIPLES OF OPERATIVE SURGERY, Two Weeks, October 17
 FRACTURES & TRAUMATIC SURGERY, Two Weeks, September 26
 THORACIC SURGERY, One Week, October 3
 ADVANCES IN GYN-OB, One Week, September 26
 VAGINAL SURGERY, ONE WEEK, October 17
 UROLOGY, Two Weeks, October 24
 PEDIATRIC SURGERY, One Week, October 3
 ADVANCES IN MEDICINE, One Week, October 3
 BASIC ELECTROCARDIOGRAPHY, One Week, October 10
 CLINICAL USES OF RADIOISOTOPES, One Week, October 3
 ANESTHESIA, Inhalation, Endotracheal, Regional, Request Dates

*Information concerning numerous other
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For further information please contact:

Aaron M. Rosenthal, M.D., Symposium Chairman
Telephone: 277-4000, extension 483

NEWS and ANNOUNCEMENTS

(continued from page 377)

Crusade of Mercy



An over-the-top success in its first year, and even bigger expectations for the year to come—that's the story of the Metropolitan Crusade of Mercy which opens its 1966 campaign on September 27.

1965 was the first year that suburban chests and funds (affiliated with the Suburban Community Chest Council) joined in the fund-raising campaign conducted by the Community Fund of Chicago and the Mid-America Chapter of the Red Cross. The successful Metro drive raised almost \$21 million to aid 700 human care services.

This year the Metropolitan Crusade is larger both in dollars and in area covered. Sixteen new suburban chests and united funds have joined, bringing the total to 71 covering 108 communities in five counties. And the 1966 goal, \$22,750,000, is 6.2 percent more than the participating groups raised separately last year.

Emory Williams, treasurer of Sears, Roebuck & Company and general campaign chairman of the 1966 Metropolitan Crusade, said, "Last year was a good beginning. It got us organized and moving in the right direction. But it's up to each individual—particularly those who are asked to contribute at work—to make Metro a lasting success."

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OBITUARIES

George W. Bard*, Kankakee, died July 24, aged 41. A graduate of the University of Illinois College of Medicine in 1952, he specialized in ophthalmology. Doctor Bard was a staff member of St. Mary's and Riverside hospitals and a member of the American Board of Surgery.

George E. Baxter*, California, formerly of Chicago, died July 22, aged 92. He was a graduate of Northwestern University Medical School in 1899. He was an emeritus member and a member of the Fifty Year Club of ISMS.

William H. Browne*, Evanston, died August 10, aged 70. A graduate of the University of Illinois College of Medicine in 1923, he specialized in obstetrics and gynecology.

George C. Coe*, Chicago, died July 21, aged 59. A graduate of Rush Medical College in 1934, he specialized in internal medicine.

Bert R. Cole*, Mattoon, died March 28, aged 82. A graduate of the University of Louisville School of Medicine in 1909, he served on the staff of Memorial hospital. He was a member of the Fifty Year Club of ISMS.

T. M. Garvin*, Chicago, died July 27, aged 86. A graduate of the State University of Iowa College of Medicine in 1907, he was a member of the Fifty Year Club of ISMS.

Frank C. Hofrichter*, Cicero, died July 22, aged 54. A graduate of Loyola University School of Medicine in 1933, he specialized in general surgery.

Earl D. Huntington*, Chicago, died August 5, aged 78. A graduate of Rush Medical College in 1918, he specialized in occupational medicine. He was an emeritus member of ISMS.

John E. Kearns, Jr.*, Evanston, died August 2, aged 60. A graduate of Northwestern University

Medical School in 1932, he specialized in general surgery.

John D. Koucky*, River Forest, died August 4, aged 69. He was a graduate of Rush Medical College in 1921.

John P. O'Neil*, Glenview, died July 30, aged 84. A graduate of the University of Illinois College of Medicine in 1906, he specialized in urology. He was an emeritus member and a member of the Fifty Year Club of ISMS.

John F. Perkins, Jr., Chicago, died August 7, aged 57. A graduate of Harvard Medical School in 1936, he specialized in physiology. He was a professor at the University of Chicago for 19 years, a member of the research committee of the Chicago Heart Association and appointed to the physiology studies section of NIH since 1963. He was a member of many medical organizations.


Albert E. Rauh*, Springfield, died August 17, aged 57. A graduate of Harvard Medical School in 1935, he specialized in psychology.


Florance L. Sullivan*, Freeport, died August 7, aged 64. He was a graduate of the University of Chicago School of Medicine in 1933. He was past president of Stephenson County Medical Society, member of the ISMS Mental Health Committee and a member of the Governor's Conference on Youth.

Earle H. Thomas*, Florida, formerly of Evanston, died April 29, aged 75. He was a graduate of Chicago College of Medicine and Surgery in 1916.

Clifford P. White*, Florida, formerly of Kewanee, died August 7, aged 64. A graduate of Dalhousie University Faculty of Medicine, Halifax, Nova Scotia, in 1929, he was a member of the Fifty Year Club of ISMS.

**Indicates member of Illinois State Medical Society.*





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Illinois Medical Journal

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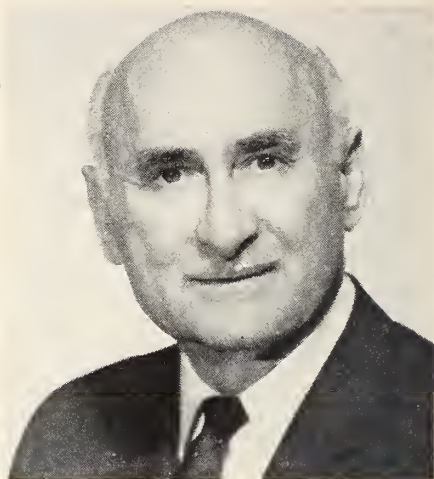


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The president's page



Caesar Portes, M.D.

DOCTORS IN POLITICS

Marked changes have taken place during our times in this world in which we live. We doctors have seen tremendous scientific advances. We have been part of this great progress in medicine. We have been able to prolong life and we have been able to keep this nation as one of the top healthy nations of the world. However, we have not participated in other spheres as we should have. We must understand that our interests should lie in the social, political and economic areas as well. The doctor must participate in politics, in civic affairs and in the business interest of his community.

Our main difficulty has been the failure of over 200,000 of our members to participate in civic and political affairs and to keep their fingers on the pulse of the times. Too often the doctor has felt that politics was below his dignity and outside of his interests. He can not and must not continue such belief.

Our scientific meetings are necessary. We must continue to educate ourselves and to improve ourselves in the care of the sick. And surely the care of the sick public as a whole is our prime interest—but we must not neglect our duty to the community. We must be part of the economic, the civic and the political arenas. At all meetings of medical organizations, one or more of these subjects should be on the agenda. They are becoming just as important to the survival of the independent practice of medicine as the scientific advances we are stressing.

Politics is the basis of our future existence. In order for the medical profession to retain its dignity and to maintain its freedom and free enterprise, we must become involved in the politics of this country. We must work hard and support the candidate who is going to favor the type of medicine that we are practicing. We must have that support from our legislators, from the government. We must make sure that our patients realize and are aware of the dangers and the pitfalls of some of these issues that are being forced upon the public. Our image has been distorted by those who are forcing socialistic schemes upon the profession and the public. We are strong only if we become interested and involved.

Soon, an election will be upon us. Doctors should become acquainted with the issues. We should ascertain the position and platform of the men running for office. If we hope to amend or even repeal the Medicare Law, we must elect men to Congress who will sympathize with our position.

I'm sure every doctor has at least 100 patients whom he could influence to vote his way. Imagine if our total membership could become so involved and interested—this would mean 1,000,000 votes that might swing toward our thinking.

Doctors: Get busy! Get politically minded! It is our civic duty and responsibility as citizens of this country.



A NEW APPROACH TO THE MANAGEMENT OF ATOPIC DERMATITIS

Roland S. Medansky, M.D./chicago

ATOPIC DERMATITIS is a cutaneous reaction of a constitutionally predetermined state or "diathesis," which is usually associated with certain stigmata in the patient and/or his family. Among these stigmata are hay fever, asthma, numerous sensitivities to protein allergens, eosinophilia, Prausnitz-Kuestner antibodies and dry skin.¹ The cutaneous lesions are characterized as papular, lichenified, highly pruritic, not sharply demarcated plaques with a predilection for the antecubital spaces, popliteal spaces, eyelids, sides of the neck and dorsa of hands and fingers.

Usually, multiple etiologic factors act in combination to bring about the exacerbation. Any stimulus that causes pruritus, which leads to scratching, suffices for production of the skin lesions and produces lichenified plaques. Environmental factors, extremes of temperature, external irritants and psychogenic stimuli often act as triggers that will aggravate this condition and produce intensified physiologic and emotional responses. The natural course of this condition is characterized by spontane-

ous exacerbations and remissions. This has been a factor in the widespread divergence of opinion with regard to optimal therapy.

Because of the numerous factors that may be involved in atopic dermatitis, each patient presents a therapeutic challenge. The primary objectives of local management are to relieve itching and inflammation. Recent studies have suggested the value of a corticosteroid solution regimen.^{2,3,4} This project was undertaken during a winter in Chicago to determine if a cold climate would produce statistically different results from the previous studies performed in relatively warm climates.

Objectives of Treatment

In following the treatment outlined by Scholtz² and continued by Ayres,³ we attempted to accomplish the following:

1. Preserve the natural lipid surface film that is still present in the patient.
2. Avoid controllable stimuli; such as (a) bathing, (b) greases, (3) ointments.

TABLE 1

Clinical Trials with Synalar Solution 0.01%						
Case	Sex	Age	Duration of Eruption	% of Body Area Involved	Duration of Treatment	Results
1	F	22	4 Yrs.	40	Periodically 1 Year	Moderate improvement
2	M	42	41 Yrs.	50	2 weeks	Worse
3	F	5	5 Yrs.	60	3 weeks	Slight improvement
4	F	2	2 Yrs.	30	28 weeks	Excellent
5	F	46	44 Yrs.	60	5 weeks	No improvement
6	M	30	30 Yrs.	40	2 weeks	No improvement
7	F	17	16 Yrs.	60	2 weeks	Worse
8	F	10	8 Yrs.	60	3 weeks	Moderate improvement
9	F	10	7 Yrs.	75	7 weeks	Slight improvement
10	F	19	15 Yrs.	15	5 weeks	Moderate improvement
11	F	2	2 Yrs.	60	3 weeks	Moderate improvement
12	F	3	3 Yrs.	40	6 weeks	Complete
13	F	1	16 Wks.	40	2 weeks	Complete
14	F	23	21 Yrs.	45	6 weeks	Excellent
15	F	38	38 Yrs.	20	3 weeks	Slight improvement
16	F	4	3 Yrs.	25	3 weeks	Complete
17	F	29	9 Yrs.	20	4 weeks	Worse
18	F	32	6 Yrs.	60	6 weeks	Moderate improvement
19	M	61	3 Yrs.	20	3 weeks	Excellent
20	M	7	5 Yrs.	50	9 weeks	Moderate improvement
21	F	1	1 Yr.	50	4 weeks	Slight improvement
22	F	9	7 Yrs.	50	4 weeks	Excellent
23	M	1½	1½ Yrs.	40	4 weeks	Moderate improvement
24	M	4 Mo.	16 Wks.	35	1 week	Moderate improvement
25	F	2	1 Yr.	20	8 weeks	Moderate improvement
26	F	4	1 Yr.	15	8 weeks	Complete
27	M	25	25 Yrs.	30	8 weeks	Excellent
28	F	31	15 Yrs.	15	6 weeks	Excellent
29	F	18	5 Yrs.	60	9 weeks	Moderate improvement
30	F	18	17 Yrs.	20	11 weeks	Excellent
31	F	17	15 Yrs.	25	6 weeks	Excellent
32	M	9	6 Yrs.	10	9 weeks	Worse
33	F	5	1 Yr.	50	8 weeks	Moderate improvement
34	F	2	1 Yr.	40	6 weeks	Excellent
35	M	11	4 Wks.	9	6 weeks	Excellent
36	F	3	3 Yrs.	15	6 weeks	Excellent
37	F	13	12 Yrs.	25	6 weeks	Moderate improvement
38	F	2	1 Yr.	10	8 weeks	Excellent
39	M	15	4 Yrs.	60	2 weeks	Worse
40	F	2	2 Yrs.	18	10 weeks	Excellent
41	M	1	1 Yr.	40	6 weeks	Complete
42	F	12	10 Yrs.	10	7 weeks	Excellent
43	M	8	7 Yrs.	20	6 weeks	Excellent
44	M	3	2 Yrs.	35	2 weeks	Excellent
45	M	28	25 Yrs.	25	34 weeks	Excellent

3. Heal the dermatitis by topical corticosteroids in non-lipid vehicles.
4. Decrease the amount of dry skin.

Outline of Study

The cornerstone of this approach is the topical application of fluocinolone acetonide (Synalar) solution 0.01% in propylene glycol. The low surface tension of propylene glycol aids the penetration of the fluocinolone acetonide into the lesions and the low evaporation rate allows prolonged contact with the treated site. In addition, the antimicrobial property of propylene glycol⁵ may offer significant therapeutic value.

Patients were selected at random over a variable age span with variable degrees of skin involvement. They were instructed to apply the solution sparingly to all affected areas twice daily, and to rub the material in thoroughly and gently.

In addition, a modified Scholtz³ regime was prescribed. Bathing was restricted; greasy lubricants were avoided and a lipid-free lotion (Cetaphil, Texas Pharmacal) was prescribed for daily use. Only the unaffected axillary, inguinal, crural and perianal regions, as well as the fingers and toes, were permitted to be cleansed with soap and water. No dietary restrictions were imposed. Thyroid extract and Vitamin A were not administered. Supportive therapy in the form of systemic antibiotics, sedatives and antihistamines were given only when deemed necessary.

Results

In view of the fact that this condition is a long standing one, patients are readily aware of any significant improvement. Forty-five patients were evaluated and, of these, five also served as controls by receiving a propylene glycol solution without the steroid. All patients placed on propylene glycol solution reported their condition worsened, but these individuals noted subsidence of the flare-ups when Synalar solution was administered.

Table 1 describes the patients studied; includes the duration of the condition, the percentage of body area involved, the time on therapy and the results observed.

TABLE 2

Response to Synalar Solution		
Response	Number of Patients	Percent
Complete (100%)	5	11
Excellent (75%)	17	38
Moderate (50%)	12	27
Slight (25%)	4	9
None (0%)	2	4
Worse	5	11
TOTAL	45	100%

Of the forty-five individuals studied, thirty-eight (84%) improved. Five (11%) of the patients had a complete remission of symptoms; while an improvement of fifty percent or more occurred in twenty-nine (65%) (Table 2). The degree of improvement was based on decreased itching, decreased erythema and diminished lichenification. Response to treatment was gratifying due to the prompt relief of symptoms.

Although drying of the skin was initially noted by twelve patients, it did not prevent continuation of therapy. This initial development of dryness posed only a transient problem since the effect gradually disappeared in most patients within seven to fourteen days. Five patients complained of a transient burning on denuded or fissured areas. There were no systemic corticoid effects.

The majority of patients preferred this vehicle to any other previously used ointment or cream base.

This study did not attempt to compare the effect of Synalar solution with any other known methods of treatment.

Summary

Atopic dermatitis represents a common dermatological problem that has previously been treated with various modes of therapy. The regimen adopted in this trial was basically simple to follow and produced remissions in the majority of individuals. The solution is cosmetically acceptable to

most patients and side effects are minimal. Compared to previous studies, our results indicate that the difference in climate was not a significant factor. Although the number of patients studied is relatively small, the response appears significant enough to warrant further use of Synalar solution in the management of atopic dermatitis.

Thanks to Drs. Raymond M. Handler, Bruce B. Burgess, and Harvey J. Fagelson, for their assistance in the treatment of these patients.

Synalar Solution used in this study was supplied by Kenneth J. Dumas, M.D., Syntex Laboratories, Palo Alto, California.

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THE INTERPRETATION OF SYPHILIS FIGURES

Reported syphilis morbidity has been increasing generally throughout the nation and many parts of the world; and the trend is not confined to any race, sex, socio-economic group or geographic area. But, because of many variables, morbidity trends do not necessarily reflect actual incidence trends.

Increasing primary and secondary syphilis morbidity in any given area may mean some or all of the following:

1. Syphilis incidence is increasing
2. The finding and identifying of cases in their earliest stages has been intensified

Decreasing primary and secondary syphilis morbidity in any given area may mean some or all of the following:

1. Syphilis incidence is decreasing
2. Casefinding has become less effective
3. Fewer diagnosed cases are being reported

It must not be overlooked, however, that in any given area, increasing incidence may co-exist with decreasing effectiveness of casefinding and/or reporting, and *vice-versa*. So, in two areas, opposite combinations of factors may result in identical trends or even static figures.

Therefore, the Public Health Service prefers to leave any interpretation of morbidity figures for individual states and cities to local authorities who are in much more advantageous positions to know all the factors. *U. S. Department of Health, Education, and Welfare, Public Health Service, Communicable Disease Center, Venereal Disease Branch, 1966.*

AVIAN EMBRYO RABIES IMMUNIZATION

*Paul R. Schnurrenberger, D.V.M., M.P.H.,**
*Winslow J. Bashe, Jr., M.D., M.P.H.,** and*
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THE ACCEPTED ROLE of vaccines has been that of developing immunity within an individual against a given disease, in an effort to ward off infection in the event of a subsequent exposure. Because of low exposure rates in the general population and the small but ever present danger inherent in the use of a vaccine of nervous tissue origin, rabies vaccine in man has been relegated to use subsequent to exposure. However, the cultivation and passage of a strain of rabies street virus in the developing chicken embryo by Koprowski and Cox¹ opened a new horizon to the pre-exposure rabies immunization of high risk human populations.

Serial passage of this particular strain (Flury) in the chicken embryo resulted in important modifications of its disease producing properties. After a low number of passages (40-60) the strain lost its virulence for the dog and rabbit when inoculated via the intramuscular route² making possible the development of an improved canine vaccine.

A further modification of the virulent properties of the Flury strain of virus was observed following the 175th egg passage.³ Virus recovered at this passage level was not pathogenic for adult mice while the

immunizing qualities remained unchanged.⁴ Vaccine prepared from this high egg passage (HEP) virus (180-210 passage) was made available to study its use as a possible pre-exposure vaccine in man. Early workers employed this vaccine intramuscularly with only fair results.⁵ Administration of a similar product intradermally produced responses in a higher percentage of subjects.⁶⁻⁹ This product, however, still had three disadvantages:

1. Moderately severe local reactions were commonly encountered.
2. Intradermal administration is a more demanding technique than either the subcutaneous or intramuscular route.
3. Response remained well below 100% even after 4 intradermal inoculations.

Adaptation of the HEP Flury strain to chicken embryo tissue culture (TC) resulted in a product with a smaller amount of nonviral protein than is usually associated with rabies vaccine. Preliminary trials in which this product was administered intramuscularly to man suggested it might provide an easy, safe, effective means of pre-exposure immunization.¹⁰

The lack of uniformity in the results recorded here demonstrates that certain precautions are essential before pre-exposure immunization of man against rabies can be utilized with confidence.

Materials and Methods

Two vaccines were utilized in the study reported here. One was the HEP chicken

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TABLE 1

Serologic Response to Three Intradermal Inoculations of HEP Rabies Vaccine in 164 Subjects.

Group	Interval in Days Between Inoculation & 2nd Blood	No. of Persons Inoculated	Number Responding			Percent Responding	
			I*	W**	N***	I	I & W
1	31-32	101	58	18	33	49.5	67.3
2	66	63	10	8	45	15.9	28.6
TOTAL		164	60	26	78	36.6	52.4

* - Demonstrable Antibody

** - Weakly Demonstrable Antibody

*** - No demonstrable Antibody

embryo vaccine prepared by the method of Sharpless et al.⁸ The other vaccine (TC) had undergone an additional six passages in chicken embryo monolayer tissue culture as described by Ruegsegger.¹⁰ The subjects were students at The Ohio State University, College of Veterinary Medicine (Groups 1, 2, 3, 4), practicing veterinarians (Group 1), dog wardens (Group 1) and workers in the Ohio Department of Health Rabies Diagnostic Laboratory (Group 1). Assignments into groups were not for study purposes but were made arbitrarily according to the persons available at the time of inoculation. The groups were all male and ranged in age from 20-32 with the exception of those in Group 1 who were slightly older. A pre-vaccination blood specimen was obtained on all subjects. Groups 1 and 2 then received lyophilized HEP rabies vaccine reconstituted with sterile saline just prior to use. These individuals received three intradermal inoculations of 0.2 ml. each, on the medial aspect of the forearm, administered at five-day intervals.

Group 3 received TC vaccine reconstituted with distilled water while the vaccine administered to Group 4 was reconstituted with distilled water containing 0.02% aluminum hydroxide. Each subject received 4 weekly intramuscular inoculations of 1.0 ml. each.

Serum samples were stored at 20° C. until testing by the serum neutralization technique in mice.⁸

Pre-vaccination sera from 269 individuals were examined. Of these, 16 provided

protection for mice and were thus classified as immune or weakly immune. Six of these 16 denied any history of exposure to rabies or of prior antirabic vaccination. Neutralization test results on the post-inoculation specimens of 164 previously unvaccinated subjects with negative pre-immunization sera are recorded in Table 1. Antibody response was detected in 86 (52.4%), but varied from 67.3% in Group 1 to 28.6% in Group 2. An additional 68 persons had received one or more inoculations of vaccine but data on the serologic response are not available.

As can be seen in Table 2, the nine persons with histories of previous antirabies vaccination all had neutralizing antibodies after one or two intradermal boosters of HEP vaccine.

A single intradermal booster of HEP vaccine was given to 36 individuals, 12-23 months after the primary vaccine series (Table 3). Demonstrable antibody was found in 30 (83.3%) seven days after administration of the booster.

Sera Tested

Pre- and post-vaccination sera were tested on 62 individuals who had received the complete series of 4 inoculations of tissue culture vaccine. Antibody was demonstrated in the serum of 32 of these individuals 49 days after the primary inoculation. No difference in response was noted between the group receiving vaccine diluted with distilled water and the group receiving the vaccine diluted with distilled

water plus aluminum hydroxide.

No systemic reactions were noted in persons receiving either vaccine. The incidence of local reactions was much less in those inoculated with the TC vaccine.

Discussion

The antibody response of Group 1 (68 of 101) is similar to other reports on the use of HEP vaccine and is sufficiently high as to warrant consideration for routine immunization of high risk groups. The results in Group 2, however, are significantly different ($P < 0.01$). The techniques of vaccine preparation, administration, and serologic evaluation were examined closely. The only two important variables disclosed were the vaccine lots and the interval before collection of the post-immunization bloods. Even the inoculators were the same.

Conditions in the TC vaccine portion of this study matched those reported by Ruegsegger and Sharpless,¹⁰ but serologic response to the vaccine was far poorer than they reported.

On the basis of this lack of uniformity with the live vaccines, it is recommended that pre-exposure rabies vaccination of man be performed with duck embryo vaccine.⁷ This series of three inoculations, the first two at weekly intervals followed in six months by a third, may be either 0.2 ml. intradermally or 1.0 ml. subcutaneously.

It should be emphasized that regardless of the primary sensitizing procedure employed in pre-exposure rabies vaccination, its success can be measured only as it affects the response to a booster dose at the time of exposure. If those persons reported here as failing to respond have still been sensitized so that they will respond rapidly and maximally to a future injection, the procedure has been successful. However, it has been repeatedly demonstrated that a direct relationship exists between response to the primary series and subsequent booster.⁶⁻⁹ Therefore, in the event of an exposure, it is not advisable to rely upon a single booster inoculation unless the person in question has been demonstrated by antibody determination to have responded to an earlier course of vaccine.

Summary

Serum neutralizing antibody against rabies was demonstrated in the pre-vaccination sera from 6 to 259 persons who denied receiving prior antirabies vaccination.

Serologic response was detected in 52.4% of 164 persons who had received 3 intradermal inoculations of high egg passage vaccine and in 50.0% of 62 who had received 4 intramuscular inoculations of high egg passage tissue culture vaccine.

Persons receiving pre-exposure vaccina-

TABLE 2

Serologic Response to an Intradermal Inoculation of HEP Vaccine in Nine Persons With a History of Prior Antirabies Vaccination.

Years Since Prior Series	No. Prior Doses	No. HEP Doses	Pre-Booster Titer	Post-Booster Titer
2	14	1	I*	I
6	14	1	I	I
8	14	1	N**	I
9	14	1	I	I
9 & 10	14, 14	1	I	I
15	14	1	N	I
17	5	1	N	I
20	14	1	N	I
18 & 27	14, 21	2	N	I

* - Demonstrable Antibody

** - No Demonstrable Antibody

TABLE 3
Neutralizing Antibody Response to a Single Intradermal Booster of HEP Rabies
Vaccine Administered to 36 Persons 13-23 Months After the Primary Series.

Response to Original Series	Response to Booster			TOTAL
	Non-Immune	Weakly Immune	Immune	
Non-Immune	6	1	13	20
Weakly Immune	0	2	3	5
Immune	0	0	11	11
TOTAL	6	3	27	36

tion against rabies should always have a post-vaccination serum examined for the presence of rabies antibody.

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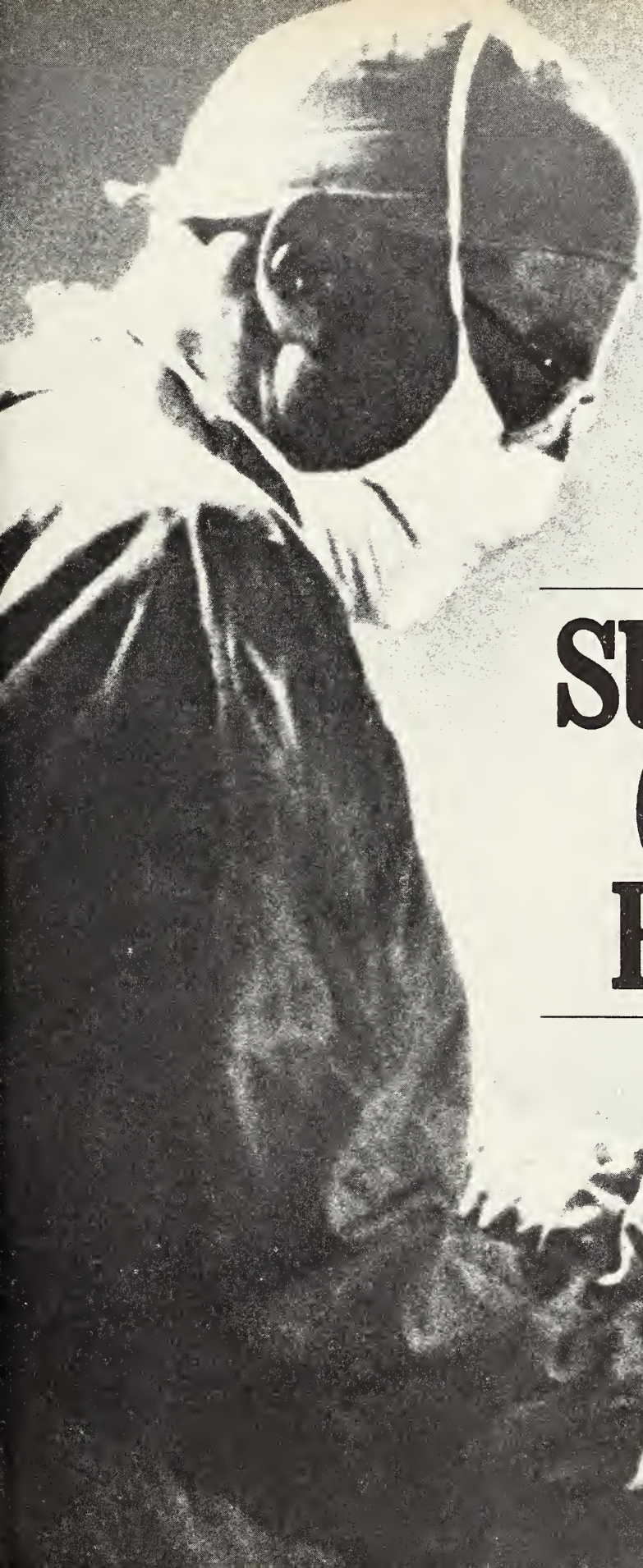
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OPEN-HEART SURGERY ON THE ELDERLY

Data on 54 patients, 60 years of age or more, who had open-heart surgery are reported. This series is comprised of all patients in this age group who were treated surgically from January 1, 1957 to December 31, 1964. Eighty-two percent were operated on in the past two years.

The most common indications were left ventricular aneurysm and aortic valve disease (39 patients). The ages of the patients in this series ranged from 60 to 73 years, with a mean age of 63. Operative mortality was 20% for the entire series and 11% in the last year reported (1964).

It is concluded that advanced age should not be a deterrent to the selection of surgical therapy for elderly patients with heart disease provided that the proper indications exist. Open-heart surgery may be performed in the elderly with mortality that compares favorably with that encountered in younger individuals with similar lesions. *Circulation*, April 1966.



I M J

**SURGICAL
GRAND
ROUNDS**

JOHN M. BEAL, M.D./Editor

*Professor and Chairman, Department of Surgery,
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This case report was part of Surgical Grand Rounds held at Passavant Memorial Hospital on April 16, 1966.

CASE PRESENTATION

Small Bowel Obstruction Secondary to Hematoma of the Mesentery

Dr. Sidney Haid: This patient is a 58 year old white male admitted to Passavant Memorial Hospital April 7, 1966. He had a two week history of excessive and easy bruising from minor trauma. Three days prior to admission he experienced nausea and anorexia without vomiting or abdominal pain. The evening of admission he developed severe intermittent abdominal pain localized in the left lower quadrant. He had not had bowel movements for three days with the exception of a small amount of colored return from an enema. He also noticed on the day of admission that his urine was a dark smokey color. When he arrived at Passavant he was in obvious distress. Soon after admission he vomited approximately 500 cc. of clear gastric contents. A history of excessive or abdominal bleeding was absent and he had been operated upon twice without complications. He admitted that he had taken anticoagulants in the past in the form of Dicumarol® for treatment of a myocardial infarction approximately ten years ago. This medication had been discontinued in December 1965 by his physician because of hematuria, and he denied taking anticoagulants since that time. The only treatment he would admit to at the time of admission was Titalac® and belladonna for a "nervous stomach."

Examination revealed that he was in acute distress. He was afebrile and vital signs were stable. He had a large ecchymosis in the right antecubital fossa of the right arm and another over the right iliac

crest. On further questioning he said he was struck by a truck door the previous day. There was scattered petichiae over both his legs. Abdominal findings included tenderness and guarding just to the left of the umbilicus and in the left lower quadrant; bowel sounds were slightly hypoactive. Rectal examination was normal; stool obtained on the examining finger was Guaiac negative.

Initial laboratory work showed the urine to be grossly bloody, the clotting time was 24 minutes, hemoglobin 14.9 gm. percent, hematocrit 44.5 percent, leukocyte count 7,250 with neutrophilia of 84 percent. X-rays of the abdomen were obtained.

Dr. William Brand: The examination of the abdomen in the erect, supine and lateral projections showed some distended loops of small bowel. These were most obvious in the supine film. There was no evidence of free air and the appearance of the small bowel loops indicated that there might be a little thickening of the adjacent mesentery. There was gas in the colon. We would consider this to be an incomplete small bowel obstruction.

Dr. Haid: He was observed closely overnight and by the following morning he was obviously worse. There was a slight fever of 99.6. The repeat leukocyte count was 12,100 again with neutrophilia. He was experiencing more pain, there was more tenderness and more guarding and bowel sounds were absent. Additional coagulation studies were obtained.

Dr. Joseph Sherrick: I thought that this might be a good time to demonstrate how the laboratory makes a specific diagnosis of a coagulation defect. Although the theories of coagulation have become complicated, three basic processes occur which are fairly simple (Fig. 1). First, when platelets or tissues are injured in the pres-

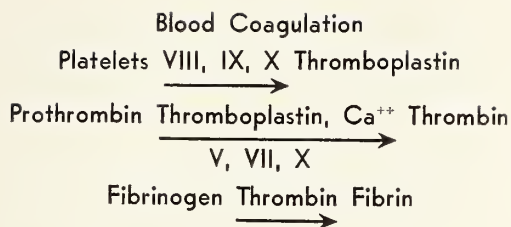


FIGURE 1. Stages of blood coagulation, simplified.

ence of certain blood factors, thromboplastin is produced. Thromboplastin, with other factors, reacts in an enzymatic manner on prothrombin to produce thrombin. Thrombin, another enzyme, acts to change fibrinogen from a soluble protein to an insoluble protein, fibrin, and thus a clot is formed.

The history is important in establishing the type of coagulation defect. In this case the history of sudden onset is significant, eliminating most of the congenital defects. The patient's coagulation time was prolonged and on the morning after admission was 31 minutes (normal 15 minutes). This is a non-specific test which indicates there is something seriously wrong with the coagulation mechanism. The prothrombin time at the same time was 53 seconds (normal $11\frac{1}{2}$ seconds), a striking abnormality. This implicated a group of coagulation factors called the prothrombin complex, although there are several other situations that might produce a gross coagulation defect of this type.

To eliminate the latter, we measured the fibrinogen content and found it normal. Fibrinolysins might be involved. If so, fibrin might be formed but might be dissolved as rapidly as it was formed. Fortunately the surgeon wisely had preserved a tube of clotted blood and by the next morning the clot had not dissolved. This simple test proved that excessive fibrinolytic activity was absent. A platelet deficit was eliminated by the platelet count. A prothrombin consumption test was performed, a test in which a sample of serum is examined to determine how much prothrombin remains. Under normal circumstances, when blood clots, all the pro-

thrombin in that sample is consumed. If it is not, a defect in one of the early stages of coagulation is indicated. Prothrombin consumption was normal in this patient, and this simple test rules out the hemophilias. It was found that when fresh plasma was added to the patient's plasma, the prothrombin time was reduced to normal. This rules out a circulating anticoagulant such as heparin. The addition of plasma containing factor 5 to the patient's plasma did not correct the defect; thus factor 5 was not involved.

By elimination, prothrombin, factor 7 and factor 10 are the only ones remaining. Factor 10 has never been reported to produce a defect of this type. Therefore, we concluded that prothrombin and factor 7 must be the deficiencies involved. These two factors are related to Vitamin K and are influenced by changes in Vitamin K. Vitamin K deficiency may be caused by obstructive jaundice, profound liver disease, intestinal malabsorption, and the administration of antibiotics to sterilize the intestine. These conditions were not present in this case. Certain drugs may also produce this condition. The most common of these are coumarin derivatives or salicylates. We concluded that this patient had a specific coagulation defect involving the prothrombin complex of coagulation factors and suggested to the clinicians that they should consider the possibility that the patient had been taking drugs of the coumarin type.

Dr. Haid: In addition the serum bilirubin level was within normal limits. The patient repeatedly denied taking any drugs other than those described above; however, his wife indicated that he had "a drawer full of drugs" and that he took a variety of medications regularly.

Dr. Brand: Additional abdominal X-rays were taken. The supine and erect films taken later did not show evidence of free air and the gas pattern again suggested an incomplete small bowel obstruction.

Dr. Haid: He was given soluble Vitamin K (AquaMEPHYTON) 25 milligrams intravenously, at 11:30 in the morning. By



FIGURE 2. Photograph showing hemorrhage into mesentery of small intestine, and sharply localized nature of intestinal lesion.

one o'clock the prothrombin time was 42.5 percent of normal, a significant improvement. He also was given four units of fresh frozen plasma.

He was taken to the operating room and an exploratory laparotomy was performed. Approximately one liter of blood was found in the peritoneal cavity. A segment of ileum, approximately 18 inches in length, appeared to be infarcted, and the mesentery was filled with hematoma in a fan-shape fashion from the root of the mesentery. The affected bowel was excised and intestinal continuity was restored with an end to end anastomosis. There was one small area distal to the site of resection where the wall of the bowel appeared dusky; however, the mesentery was normal and it was not resected. Post-operatively the patient recovered well. He has had no further evidence of bleeding and coagulation studies have returned to normal.

Dr. John Scarff: The resected loop of small intestine (Fig. 2) measures 475 mm. in length. The greatest part of the attached mesentery is thickened and filled with blood, measuring up to 20 mm. in thickness. Narrow strips of normal mesentery on each side of the hemorrhagic area are attached to serosa of healthy-appearing small intestine. The normal serosa of each of these short segments of bowel is sharply demarcated from the black hemorrhagic serosa of the large swollen central segment of bowel corresponding to the intramesen-

teric hematoma described. The mucosal surface shows the same sharp line of demarcation between the central hemorrhagic and the two normal segments of small intestine at each end.

A wall of extravasated blood in the sub-mucosal and muscularis layers separates the involved intestine abruptly from the adjacent normal (Fig. 3).

The overlying mucosa is normal, a result of early diagnosis and prompt surgical intervention. Thrombi are not present in the blood vessels of the involved mesentery. Active hemorrhage into the mesentery supplying this loop of small intestine may

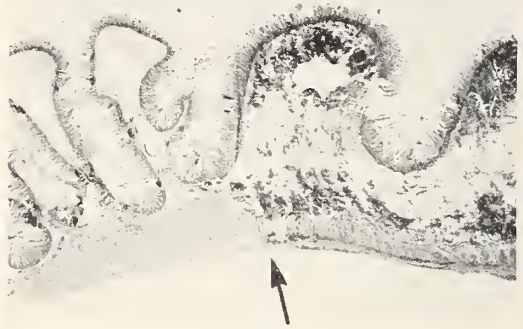


FIGURE 3. Photomicrograph of small intestine showing intramural hemorrhage. (x10)

have produced significant extrinsic pressure to cause localized venous occlusion with secondary capillary hemorrhage within the wall of the small intestine.

Dr. Walter Rambach: When I was asked to see this patient the initial problem was to determine a prior history, if any, of bleeding. The patient was an unreliable historian, but he denied antecedent bleeding episodes which might have been compatible with an inherited deficiency of one of the major plasma coagulation factors. Although he had a petechial eruption, it was limited to the legs and long antedated the current problem. Since, in addition, I knew, at the time of examination, that his platelet count was normal, I could assume that the petechial eruption bore no relation to the current bleeding and the ecchymotic lesions of his body. Thus, the most probable cause for sudden bleeding

in a patient without prior history, acute thrombocytopenia, was ruled out.

Again, by the time of my examination a prothrombin time had been obtained, and the factor 2 level was known to be 7 percent. A factor 2 level this low in an otherwise previously healthy individual would have to be produced by one form of drug or another, most likely a coumarin derivative. A congenital hypoprothrombinemia is quite rare, and most certainly, if the entity actually exists, would have been recognized many years before. Questioning failed to yield evidence of the ingestion of a drug which could be assumed to sharply depress the patient's factor 2 level. However, it was obvious to all who examined the patient that a full story was not being told. Accordingly, it was concluded (1) that he was intoxicated by a drug, and (2) that correction of the primary defect could be easily achieved. Vitamin K₁ can promptly restore the factor 2 level, and it was demonstrated to be rapidly effective in this patient.

In severe coumarin toxicity a misleading prothrombin consumption study may be obtained, since factor 9 (PTC, Christmas factor) may also be depressed. Because of this the patient was also given 500 cc. of fresh frozen plasma which would be expected to correct an acquired factor 9 defect. Subsequently, we know that there was no associated factor 9 defect.

Dr. Harold Method: Although an accurate pre-operative diagnosis was made, the interstitial intestinal hemorrhage had produced signs and symptoms of infarction of the bowel. Agonizing pain was a striking symptom. Much has been written during the last twenty years concerning the hemorrhagic complications of anticoagulant therapy but there has been scant reference to the complication which this patient demonstrated. The most common complications of coumarin therapy have been bleeding in the genitourinary tract presenting as hematuria, easy bruisability and subcutaneous bleeding and epistaxis. Goldfarb presented a review of the literature in 1965, in which he recorded 9 cases of his own

and 24 cases from the literature.¹ Of the total 33 cases, laparotomy was performed in 13 and the remainder were treated conservatively. It is to be emphasized that this is not an infarction. All of the reported cases had viable bowel, despite extensive interstitial hemorrhage into the bowel wall and hematoma formation in the submucosal space. The bowel obstruction is caused by a large hematoma formation in the submucosal area which obstructs the lumen. Microscopic studies, as in our case, do not show arterial or venous thrombosis. Goldfarb stated that the majority of these cases can be treated conservatively. Most of the reported patients have been under treatment with coumarin derivatives because of advanced arteriosclerotic heart disease or cerebrovascular disease, and they are at onset poor candidates for operation. Furthermore, if operation is undertaken, Vitamin K must be given in large amounts and the reversal of the hypoprothrombinemia sometimes will result in thrombosis, an even more serious problem. It has been found that most of these patients will do well with nasogastric intubation, parenteral fluids and small doses of Vitamin K. Usually they become symptom-free within two or three days. Unlike this case, the majority of cases discussed by Goldfarb had milder symptoms from 12-14 days prior to admission to the hospital. The portion of bowel that was removed in our patient had the gross appearance of infarction. Because of the severe pain and obstruction symptoms, resection seemed advisable.

Dr. John Beal: Was there a history of injury in this patient?

Dr. Method: In this patient, as in the other cases reported, there was no history of injury.

Dr. Rambach: Although the condition that Dr. Method found is unusual, it is not uncommon for us to have to make a decision as to whether or not the hemophilic patient has an acute abdominal problem. Bleeding into the Psoas musculature is relatively common in the hemophilic. Bleeding may also occur into the

mesentery, but fortunately this is not particularly common.

Dr. Beal: Was there any reason found for this man's reluctance to admit that he was taking any drug?

Dr. Sherrick: This patient may fall into the category of people who have been called "Dicumarol eaters." A recent report² on this condition indicates that these patients usually will not admit taking the drug

even though specific tests demonstrated the drug in the plasma. Many of these patients were from the medical profession or allied health fields such as nurses, technologists or veterinarians.

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WHY SO MUCH NEED?

For the most part, the need of the states and cities for additional revenue is pressing. Since World War II, the federal government has been siphoning off a much larger share of individual and corporate earnings than in earlier years. This has forced the states to adopt sales taxes, often in addition to state income taxes. It has also forced the cities and towns to depend on real estate taxes for the bulk of their revenue.

Why do state and local governments still need further large amounts? Partly because federal fiscal policies have led to higher government costs generally. Partly because there are so many more Americans to provide government services for than there were 30 years ago when our population was only 127 million compared with today's 195 million—an increase of more than 50%. And partly because we are demanding a broader range of services than ever before. *The Commercial and Financial Chronicle*, March 31, 1966.

THE REINS OF PROGRESS

Someone has said we deserve whatever kind of government we have. The principle of cause and effect prevails. Federal Paternity is the natural response to local impotence and apathy. But centralization is nearly irreversible. The trend is not turned by fanatic resistance but by the local application of vigorous alternatives well enough designed to vitiate the cause. As Alan Gregg said "Our public servants in this country are more troubled by the silent inactivity of the best citizens than by the taunts or treason of the worst." Whatever will be the future of medical practice shall be determined by the quality of medical leadership. In the sphere of social medicine neither the voice nor the truly noble traditions of medicine are ignored. But it is not the spectator who makes the decisions—it is necessary to get on the ball team. The people are only asking for leadership, not down the road of yesterday, but toward the promise of tomorrow. American medicine stands face to face with unparalleled opportunity—and not without an equal obligation to the service of society. *Group Practice*, September 1965.

ISMS
CONFERENCE
ON
NARCOTIC
ADDICTION

CHICAGO

March 24 & 25, 1966



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Introduction



JOSEPH H. SKOM, M.D.

Chairman, Conference on Narcotic Addiction,
Illinois State Medical Society

THE NARCOTICS COMMITTEE of the Illinois State Medical Society was charged by the Board of Trustees to evaluate the narcotics problem in Illinois, to study the current statutes and make recommendations on how to deal with the problem. It soon became clear that the problem is not a simple one. There was uniform disagreement on what makes someone an addict, on treatment of the addict, on who has responsibility for dealing with the problem, and on which of many rehabilitation programs is most desirable.

When we studied the approach in Illinois, we found many men of goodwill, each doing his best, each feeling himself to be in a wilderness surrounded by disinterested people (the community at large) sprinkled with a few other individuals like himself but pursuing a different course. The legislature wanted to do something but did not know what. The enforcement agencies felt lonely, criticized and without friends, yet had to enforce laws based on principles they did not necessarily always believe in.

The medical profession has shied away from this problem because of confusion, ignorance of its rights and unfounded fear of unjust prosecution or harassment and, above all, lack of appreciation of its responsibility to provide leadership to all of the men and organizations of goodwill engaged in fighting this battle but lacking the training and tools of the physician.

For this reason, the Narcotics Committee of the Illinois State Medical Society decided to have a nation-wide conference on the problem, bringing together outstanding representatives of each discipline involved. We hoped that a common denominator might be found that would make it possible to assess the evil of addiction or at least to find the best in each of many conflicting ideas and synthesize them into a constructive program in our state.

It was with these goals in mind that the following program was constructed in the form of a refresher course for each of us interested in the problem.

Editor's Note

Publication of the Symposium resulting from the Conference on Narcotic Addiction, March 24, 25, 1966, is timely. This Conference was sponsored by the Illinois State Medical Society under the Chairmanship of Dr. Joseph H. Skom, Chairman, Committee on Narcotics. This Interdiscipline Conference was held with the cooperation of the American Medical Association, U. S. Bureau of Narcotics, Illinois Pharmaceutical Association, Illinois Department of Mental Health, Illinois Division of Narcotic Control, Chicago Medical Society, Chicago Department of Mental Health, Council for the Understanding and Rehabilitation of Addicts, and Saint Leonard's House. The costs were defrayed, in part, by grants from the American Medical Association and Smith Kline and French Laboratories.

The Conference was well received by the 493 who attended from twelve states and Canada. Subsequently, publication of the

Conference was recommended by the Journal Committee and the Editorial Board of the *Illinois Medical Journal*. Cooperation of the participants in this venture is acknowledged. An Editor was appointed from the Editorial Board along with an Editorial Committee. It is a pleasure to acknowledge the valuable assistance of the latter, S. A. Levinson, F. H. Falls, H. Kravitz, J. M. Kowalski, C. J. Mueller and J. H. Skom. The aid of A. G. Boeck, Jr. and Paul S. Swarts of the Illinois State Medical Society and Miss Linn Pierson, is acknowledged gratefully.

The Editor takes responsibility for rearrangement of the presentations into a more logical sequence and for the necessary editorial changes. As the paper by Dr. D. P. Ausubel was presented by Dr. R. Schlich, both presentations are included.

E. Clinton Texter, Jr., M.D.

Guest Editor

Editorial



E. CLINTON TEXTER, M.D.

Guest Editor, Narcotics Addiction Conference

AFTER LIVING WITH THE Symposium for several weeks, the material seems like an old friend. In fact, one gets the impression that one has many friends, not many of whom are in agreement. Perhaps the greatest contribution of the Conference is served

by providing a forum for discussion and a record of these discussions.

In 1962, the First White House Conference on Narcotics and Drug Abuse was held. Another Conference on Narcotics was held on the campus of the University of

California, Los Angeles, in 1963.¹ The number in attendance at both was similar—between 400 and 500.

As a leading article in the *Lancet*² noted, The Interdepartmental Committee on Drug Addiction had the misfortune to make its original report in 1961 at which time there had been no increase in new addictions for three or four years. "At that time the committee saw no reason to recommend any positive action—neither registration of addicts, compulsory committal for treatment, nor special institutions for the purpose, or special tribunals to investigate prescribing, nor further statutory controls of any kind."

Three years later this committee reconvened to consider their previous report. The second report of the Interdepartmental Committee on Drug Addiction in 1965 reversed, in almost every particular, the advice that it had offered earlier. It moved in the direction of recommending more controls and in a direction more nearly similar to that taken by the United States.

The *Lancet*, in commenting on the report, points out that there are notable omissions from the report. There is a:

"... curious contradiction between the two reports about the nature of addiction. In 1961 the committee regarded addiction 'as an expression of mental disorder rather than a form of criminal behaviour.' Now it finds that the addict is a 'sick person . . . provided that he

does not resort to criminal acts.' This is a backward step, and out of line with both modern psychiatric and criminological views."

The *Lancet* closes:

"Here, as elsewhere, the committee seems to have sought to pluck safety without firmly grasping the nettles."

In the present Symposium, as well as elsewhere, there is a lively dialogue between those who would substitute methadon treatment for "mainline" heroin addicts as in the report of Doctors Dole and Nyswander; and its criticism by Doctor Ausubel and others. In a perceptive editorial, Irvine H. Page³ points out some of the problems in the therapy of drug addiction. He concludes his editorial as follows: "In my opinion, Dole and Nyswander's experiments are either one of the important clinical applications of well-known pharmacological principles of our time or a cruel self-delusion. Whichever they are, it is time to put aside authoritarianism and unscientific criticism and get on with solving the problem."

It is hoped that publication of this Conference will represent a step in the direction of *solving the problem*.

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Narcotics and their regulation— a lawyer's view

DAVID C. ACHESON/Washington, D.C.

IT IS POSSIBLE THAT I HAVE seen more doctors in one room than are here now, but I can't remember when. It is a particularly intimidating audience for one of my profession—the law—to address. You give an overwhelming impression of learning and material success. There does appear to be a useful role for lawyers in your medical society. You have separate committees for "Legislation" and for "Impartial Medical Testimony." That these should be under separate management opens up all sorts of interesting speculation, and clearly there must be a lively need for lawyers to help you doctors keep the infection of impartiality away from legislation.

This line of thought leads to a phenomenon that I might develop a bit—the apparent fact that the professional disciplines engage in so little common effort and seem to be isolated so much.

Initially, consider whether this is a correct statement of fact. I do not, of course, mean that the professions are not capable of the most sophisticated and momentous effort within their own disciplines. The analysis of the connection between typhus, the carrier louse and the rat, contributed to and

described so dramatically by Dr. Zinsser, was a medical achievement that has changed the course of man's life and future and ranks as one of history's great professional accomplishments. If we were looking for deeds on such a scale in the legal sphere, we would surely pick out the writing of the American Constitution. But impressive as these examples are, the point is that they were intra-disciplinary achievements. When it comes to the great public questions of our time, a new dimension of inter-disciplinary effort must be called forth if the solutions are to match the problems.

It is interesting to see how the disciplines have performed on some of our great public questions—population control, pollution, drug addiction and crime. Concerning population control, a fair observer might say that the medical discipline and the economists have led the way, with the clergy and the legal profession dragging their feet and adjusting their positions to the pressure of public opinion, which in that field is an uncertain guide, to say the least.

On pollution of air and water, and pollution control, our fair observer might say that the medical profession has not been over-extended. Rather more of the research, writing and education of the public has been done by engineers, by economists and possibly by lawyers. The

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clergy has taken virtually no part in developing the problem of pollution or forcing it toward solution, in spite of the obvious and urgent moral implications of one community's spoiling another's air and water. Yet the moral questions and the dimensions of the consequences are not less than in civil rights issues, in which the clergy has been quite active.

The problems of crime have not, until recently, engaged the serious attention of many of the professional disciplines. Sociologists, psychologists and educators have probably done the most, particularly in establishing patterns of conduct and their connection with environment and the circumstances of life. But they have been weak on proposals for solutions. Perhaps lawyers have been active, but their efforts have been rather narrowly confined to matters of enforcement and prosecution, until the broad charter of the President's Crime Commission last year. A rather sardonic, but illuminating, illustration of the narrow view is found in the story of a criminal defendant who had just been convicted after an arduous and close trial. As the shock of the guilty verdict wore off, he turned to his lawyer in the courtroom and asked, "Counselor, what do we do now?" The lawyer replied, "Well, you are going to jail and I am going back to my office."

The economists and doctors have paid less attention to the crime problem than they should. Both are closely bound up with causes of crime as well as with its consequences. The clergy has contributed very little to the solution of the problem of urban crime, with the exception of admirable, but thinly-spread, missionary work in the slums and prisons. Yet it would seem that the clergy has a serious contribution to make to any discussion of the personal and social causes of crime, and to the way society should use resources toward the elevation and protection of its members.

Concerning the problem of drug addiction, I think most would agree that your profession has done more than any other discipline. Doctors have done invaluable

service by establishing the consequences of old and new drugs to the human body and mind. This is the basic fund of data from which anyone must start who undertakes to study the drug problem. A recent case would be the excellent article of Drs. Eddy, Halbach, Isbell and Seevers on *Drug Dependence: Its Significance and Characteristics*. Your profession has contributed importantly to evaluating and choosing between competing proposals for treatment of addicts and control of addiction. One might cite the recent report of the Interdepartmental Committee on Drug Addiction in the United Kingdom, chaired by Lord Brain,¹ or, closer to home, the forceful paper prepared for this conference by Dr. David P. Ausubel² on closed-ward treatment of addicts. I document your leadership, not solely to show you that I have read the material, but to salute responsibility on this disturbing public question of drug addiction.

In comparison, lawyers and sociologists have not developed much data or many useful proposals, though there has been some study of questions such as criminal responsibility of addicts.

This is too over-simplified an account of the credits and debits of the professional disciplines, but it sharpens the point, which is the failure of any collective effort of the professions to come to grips with the important public questions of the day. The reasons for this are speculative: perhaps it is due to patterns of professional training, several generations old, which emphasize the mastering of materials without much regard for a larger comprehension. The pressure of specialization dumps ever larger heaps of materials on the student and the practicing professional man. Mastering this material grows continually more preclusive of other claims on human attention. The individual cell in the honeycomb becomes more air-tight, while professional concern with the life of the hive, let alone life outside it, diminishes. One would like to say that some new renaissance will bring the professional disciplines back into greater involvement with each other and

with the overriding public concerns of the time, but the opposite is more likely.

Thus, it has come to be recognized as a function of government to locate, extract and apply the talent and energy of several disciplines that together can tackle a problem that is too complex for any one of them. Another name for this function is *leadership*. This should not excite fear, distrust or charges of usurpation by government. There is certainly no reason to fear government domination of professional life, any more than to distrust the conductor of an orchestra because he may urge the strings to play in rhythm with the brasses.

With this effort to put the problem of drug addiction in the context of interdisciplinary approach, it might be worthwhile to discuss a few of the areas in which government will play an important part.

The drug problem was the subject of a White House Conference in 1962 and a Presidential Commission report in 1963. It ranks high in the concerns of the President of the United States and of the Governors of several of the larger states. What does the federal government think about the problem, and in what direction does it intend to push?

Our major premise is that drug addiction is harmful to the life of the individual and to the life of society. Some commentators still prefer to believe that drug addiction is not harmful and that the effect does not warrant the limitation of liberty to use drugs. The precise facts regarding the effects of drugs on people are pretty well settled, and the work of the U.S. Public Health Service and findings such as those published by Dr. Eddy and his colleagues should have ended the last echo of argument on the question of basic physical and mental effects of certain drugs.

We move to the next question—what should we do about drug addiction? Why not let drug addicts follow their private road to perdition in their own way? If the road were private, I think we would follow that policy; but it is not. Unlike Typhoid Mary, the addict is both victim

and carrier, the agent of the spreading of addiction to his friends. His addiction and his drugs go where he goes and the people with whom he associates are exposed just as Typhoid Mary's friends were exposed. The social cost of the addiction which he spreads, in wasted lives alone, removes the matter from the realm of a private affair.

Since the addict's road is not his own concern alone, our policy is to try to control addiction. This is a double-barrelled policy—to control the traffic in drugs and to rid the addict of his addiction. That policy has met with modest success, both on the local and on the federal level.

To be effective, the control of the drug traffic must have four levels of serious effort. *First*, there must be a meaningful network of international treaty obligations to control the production and export of drugs, encompassing the major market countries and the major producing countries. *Second*, there must be effective controls on production and sale in the producing countries, with adequate staffing and genuine impact upon the trade. *Third*, there must be vigorous enforcement against smuggling in the market countries, and *fourth*, there must be domestic enforcement in those countries on the local level against the local traffic. Let me say a word more on each of these elements, limiting myself to narcotic drugs for the purpose of simplicity.

The purpose of the United States in entering a treaty commitment on drug control is to serve our national policy of restricting the volume of drugs entering the U.S. market. If a treaty mechanism does not do that, I cannot see any purpose in adhering to a drug-control treaty. We think that the situation is better for the United States with the treaty arrangements than it would be without them, but I think we have a long way to go before the treaty arrangements produce a really effective system of controls and reliable statistics. We are trying hard to persuade other parties to improve their performance in those respects. In some cases we can

actually assist them to do so. This is a prospect in which President Johnson is interested, and we hope that planning that is now under way for such assistance will result in an encouraging response from other producing nations. It may be that such a response would be encouraged by the adherence of the United States to the 1961 Single Convention.

When one speaks of smuggling enforcement against a traffic such as heroin—compact, concealable and valuable—one must not forget the silent premise—that our national policy is to open our doors to the flood of travelers, goods, and mail from all over the world. This work of detecting smugglers is vital to a domestic enforcement program, but it is important to understand its limitations. It is intelligence work, not physical interdiction, and it is impossible to close the mesh of port and border inspections without immediate adverse consequences on the flow of goods and persons. But we can do more, and we should.

In the main, domestic enforcement must rely on state and local efforts, where the vast majority of the enforcement manpower is. Although the federal government can help with training programs for local officers, with investigative information and with other forms of data and material resources, the local enforcement problem is not a direct federal responsibility. Federal and local narcotics enforcement efforts have not been altogether unsuccessful. The narcotic addiction rate per head of population has been reduced to about 1/8th of the rate in 1914. During recent years, the federal addict statistics, although possibly on the low side, have been fairly steady, compared with the increases in national and local crime rates.

The last line of defense against the spread of narcotic addiction is to treat and cure the addicts themselves, shrinking the market and reducing the number of victims and carriers. There is much new effort under way on that front. The State of California can claim an encouraging, if preliminary, success with a compulsory

civil commitment law working in harness with facilities for residential treatment and rehabilitation, followed in cycle by half-way house supervision and after-care of long duration. The state administration of New York has recently made proposals similar to the California approach.

President Johnson, in his recent message on crime and in his pending legislation (S. 2152), has initiated a treatment program for those in federal custody on criminal charges. The program is based on the principle that treatment must begin with close supervision of the addict in order to assure reliable cooperation. But the program also recognizes that the addict is not cured until successfully tested in circumstances of daily life, tested "on the street" so to speak. Diminishing supervision of long duration, with counselling and other services available, is just as important in the later phases as sequestration in the early phases. Sometimes the partisans of one or the other phase of treatment talk as if they alone had the true religion, and this has considerably impeded understanding and support for the entire cycle of treatment services.

Whereas the President's federal program for civil commitment of addicts would directly reach only addicts in federal custody, the experience gained under such a program would be of very great pilot value to the states. It would be important, I think, to analyze carefully the working of such a program on a pilot scale before it is undertaken on an all-out statewide basis, so that techniques and features of treatment are not cast in bronze at the outset without a period of observation and testing. Both California's present program of drug-addiction treatment and the federal program contemplated by S. 2152 should provide experience worthy of very careful study by the other states. The President and my own Department are deeply interested in encouraging the best use by the states of the data and lessons and even errors of these early programs.

In these state efforts, the medical profession will play the leading role, though we

lawyers will also be called on to serve. It is in your discipline that the competence lies for the planning, the public education, the staffing, and the objective evaluation of an addict rehabilitation program. And, of course, where the competence lies, there also must lie the responsibility.

The aspect of drug control, including enforcement and rehabilitation, which makes the problem complex is that it calls upon several professional disciplines and levels of government, more than any one commander can deploy. These elements must work together for drug control, cohesively and with purpose. If we are incapable of this—if, like the paramecium,

we can only divide and cannot unite—our failure will not only put the drug problem beyond control, but will suggest that man's destructive powers exceed his building capacity. If, on the other hand, we can carry this job off, it will be an encouraging sign that man-made problems are not necessarily larger than the capacity of man to devise solutions. And, as Mark Twain said, this will gratify some people and astonish the rest.

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The epidemiology of drug addiction and reflections on the problem and policy in the U. S.

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THE MOST FAMILIAR AND PERVERSIVE image the public has of the drug addict is that view which results from the perceptions of those who have the most transient interest in him, i.e., the view formed by law enforcement personnel and, in particular, the ingenious image constructed by the Federal Bureau of Narcotics; and the reflection of this image in the mass media. If one is interested in making an arrest, preserving the evidence and gaining a conviction, such an interest is pragmatic and short run. It may also be shot through with paranoid projections and conscience washing rationalizations. An effective nar-

cotics officer simply wants to "make" this "junkie" while he has "the goods" and "get him off the street" or "put him away." The law enforcement and prosecution view of the drug addict is merely strategic or tactical. It is not, nor should it normally be expected to be, a sociological, psychological or cultural view.

Similarly, the interest of the mass media in the drug addict is very utilitarian and lies in his "news value." If his case has some element that can be exploited for its sense of "drama," the kind of story that is perpetrated in the name of "human interest," but is too frequently manufactured hokum, then the story can get some "play" in the mass media. "Dope-Crazed Sex Fiend Rapes Widow In Love-Nest" is a

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wonderful headline and invites the vicarious participation of a much wider readership than the tarnished drabness of a headline that would actually attempt to depict the real situation: "Impotent Drug Addict Nods in Widow's Flat." The image of a semi-catatonic drug addict under the influence of a strong depressant like heroin, who is feeling neither frenzied, assaultive nor erotic, is not particularly newsworthy. That is a "dog bites man" story and there is nothing as stale as yesterday's "junkie" unless he can be "jazzed-up" for "human interest." The mass media have shown little disposition to present the real dimensions and implications of the drug problem in this country.

Although it may be conceded that we cannot expect our policemen and state's attorneys to be sociologists or psychologists, and while we may have become conditioned to expect something less than an objective and well-rounded treatment of such a subject as drug addiction from the mass media, the time is long overdue for them to quit repeating the same old clap-trap and complicating the process of public education that is necessary in order to make a more rational attack on this serious social problem.

Our knowledge of drug addiction and illegal drug use is qualitative, not quantitative, and largely impressionistic. It is true, of course, that we have some quantitative knowledge of police activity, court actions and prisoner populations in connection with offenses against narcotic laws, but there is no valid basis for extrapolating from "caught" offenders against drug laws to the number of drug addicts that exist in a given jurisdiction. The drug addict is an unknown quantity in the United States. This basic, essential and deplorable fact, however, has not prevented a number of private scholars and public agencies from making an attempt at estimating the number of drug addicts that constitute the narcotic problem.

The most widely believed estimate of the number of drug addicts in the United States was that given by the late Harry

J. Anslinger, Commissioner of the Federal Bureau of Narcotics, before the Price Daniel Senate subcommittee in 1955. "The total number of addicts in the United States today is estimated at between 50,000 and 60,000 or an incidence of about 1 in 3,000 of the population."¹ Yet, only two years earlier a Citizen's Advisory Committee to the Attorney General of California reported, "Our estimated total, therefore, would be 32,000 medical or legal users and probably 20,000 illegal, a total of 52,000 persons."² Other estimates given to either the Daniel or Boggs³ subcommittees on the number of drug addicts in various states in 1956 indicate that, in addition to the 20,000 in California, New York, Ohio and Illinois estimated 20,000, 15,000 and 10,000 addicts, respectively, a grand total of 65,000 drug addicts for *these four states alone*.

The most recent estimate for the United States appears in a special report on drugs by Time-Life Books, "... 55,899 victims, the Federal Narcotics Bureau's admittedly inexact census figure for the start of 1965."⁴ The same publication, without citing its source of information (but, presumably, the FBN), contains a map entitled, "U.S. Narcotics Addict Population Centers," which gives the following figures: New York—28,098, Chicago—7,350, Los Angeles—2,402, Detroit—1,789 and District of Columbia—1,076, a grand total of 40,710 drug addicts.⁵ It would thus appear that 73 per cent of all drug addicts live in these five cities. These five cities, which rank 1-2-3-5-9 in terms of the 1960 census, have a population of roughly 16,000,000. The next five cities, Philadelphia, Baltimore, Houston, Cleveland and St. Louis, ranking 4-6-7-8-10, contain roughly 5,500,000 people. Are we to assume that these latter five cities which, together, have one-third of the population of the first five, plus the rest of the entire United States, share the remaining 27 per cent of the drug addicts in this country? There is, obviously, something wrong with such estimated figures and a reporting system that results in such distributions.

Despite the inherent limitations of the drug addiction figures published by the FBN, some scholars rely upon them to indicate "trends" because they are the only national statistics available. One of the more sophisticated attempts to arrive at such a trend was recently made by Charles Winick, a competent scholar.⁶ He began with the number of drug addicts reported by the FBN at the end of 1962, i.e., 47,489 persons. He then averaged the number of new addicts reported during the years 1958-62, i.e., 6,840. Next, he assumed that the average user would come to the attention of the authorities in 2 years after onset, and that twice 6,840, or 13,680 persons had begun the use of drugs during 1961 and 1962 but had not yet come to the attention of the authorities. Thus, at the end of 1962 he arrives at a figure of 61,169 drug addicts as "a reasonable approximation."

We have already seen that the latest figure given by the FBN for the beginning of 1965 was only 55,899, some 5,270 fewer addicts than Winick's 1962 estimate. But Winick also cites an empirical finding from an earlier study he made, "The typical user of opiates uses them for a mean of 8.6 years."⁷ If, now, we make the calculations required by Winick's assumptions, combined with his empirical finding, we know we have to deal with at least 6,840 addicts each year for a period of 8.6 years, giving us a total of 58,824 addicts. Presumably, it would be this figure, rather than the 61,169 addicts for 1962, that would stabilize itself over the long run. But the choice is broad, we can take our pick from the following figures: (a) 47,489, FBN, 1962 year end addicts;⁸ (b) 61,169, Winick, 1962 year end addicts; (c) 55,899, FBN, 1964 year end addicts; or (d) 58,824, Winick, post-1970 stabilized count addicts.

This is tedious stuff, not to say alarming, but serves to illustrate the consequences of trying to make sense out of that which is based on pure speculation. And, if we want to cap the climax on what has more than once been called "the numbers game," we may cite the work of Eldridge.⁹ So far

as is known, he is the only "outsider" who got close enough to the Federal Bureau of Narcotics, and its system of compiling its annual addict census, to try to evaluate its validity. "W. B. Eldridge worked relatively closely with the Bureau in an attempt to discover the information that is absolutely necessary for a statistical evaluation of the project. He was unable to obtain it. He reports that no uniform standards or instructions appear to have been given to reporting agencies and that there is a great deal of confusion about what is supposed to be done."¹⁰ In addition, there is no way of knowing what agencies do, or do not, report, or of evaluating the reports received.

The would-be epidemiologist who tries to determine something about persons related to drug offenses, their numbers and demographic characteristics, is better advised to deal with "caught" populations. They, too, are shot through with ambiguities and imponderables, but the limitations of the data can more nearly be specified. For such information we must turn to the Federal Bureau of Investigation report of crime in the United States in 1964.¹¹ The FBI defines offenses against narcotic drug laws as "Offenses relating to narcotic drugs, such as unlawful possession, sale or use. Excludes Federal offenses,"¹² and they are candid enough to say, "... the FBI is not in a position to vouch for the validity of the reports received."¹³

Confining ourselves to FBI arrest data only, we find that in the year 1964, with 3,977 agencies reporting, representing 132,439,000 of the estimated 1964 population, a total of 4,582,974 arrests were made for all crimes, resulting in an arrest rate of 3,460.4 per 100,000 population. Of these, 37,802 arrests were made for offenses against narcotic drug laws, a rate of 28.5 per 100,000 population. It should be emphasized that we are talking about .8 per cent of all arrests for crime; *less than 1 per cent*. Using this total arrest figure of 37,802 offenses against narcotic drug laws as a 100 per cent base, we find that 28,932

or 76 per cent of these arrests were made in "Group I Cities," i.e., 52 cities over 250,000 population representing 40,769,000 of the estimated 1964 population. In such cities the arrest rate on narcotic offenses increases to 71.0 per 100,000 population. We also find that 5,310, or 14 per cent of these arrests were of women, and that only 3,305, or less than 9 per cent are of persons under 18 years of age. Much has been said about the use of drugs by the young and, while any addiction of the young may be deplorable, the facts as reflected in FBI arrest figures are as follows: Under 18, 8.7 per cent, under 21, 23.3 per cent and under 25, 46.1 per cent. Thus the *majority* of persons arrested for offenses against narcotic drug laws are still 25 years old and older. In the trend figures, however, comparing 1963 and 1964, it is revealed that arrests of persons under 18 years of age increased by 69.1 per cent, while arrests for persons 18 years of age and older increased by only 28.8 per cent. The over-all increase in arrest rates for offenses against narcotic drug laws was 31.4 per cent. The racial distribution of arrests must be figured on a different base due, no doubt, to less complete reporting. Only 23,730 of the arrests can be subclassified by race, a full 37 per cent of the original 37,802 arrests being unaccounted for. If we use the 23,730 arrests as a 100 per cent base, we find that 14,135 or 59 per cent of these are white, 9,277 or 39 per cent are Negro. The remaining 318 or 2 per cent of the arrests for offenses against the narcotic drug laws are scattered among all other races.

Summarizing the data from FBI arrests we find that offenses against narcotic drug laws constitute less than 1 per cent of all arrests, that three quarters of these arrests were made in large cities, that less than 15 per cent were women and less than 10 per cent were of young persons. More than half of all such arrests were of persons 25 years old and older, and the racial distribution was 60 per cent white and 40 per cent non-white. Further, since offenses against narcotic drug laws include unlaw-

ful possession, sale and use, we may *infer* that the majority of the 37,802 persons arrested under these statutes were at least users, if not addicts, but that any attempts at extrapolation from arrestees to addicts is sheer metaphysics. Lindesmith sets forth what would be required if we were to attempt an actual count of the number of drug addicts in the United States: "A comprehensive view ought to allow for the following: (1) illegal addicts known to the police by reason of violation of narcotics laws; (2) illegal addicts known to the police through violation of other criminal laws; (3) illegal addicts not known to the police; (4) addicts securing legal drugs from doctors; and (5) incarcerated users."¹⁴ It should be clear from the foregoing discussion of both FBN and FBI figures, and any speculations based upon them, that we have been dealing with only *a part* of Lindesmith's *first* category of addicts. The drug addict *qua* drug addict is an unknown quantity in the United States.

Whatever the number of drug addicts may be, it is certain that the narcotics problem in the United States is partly a product of socialization and adjustment processes and partly a product of the public policy and enforcement procedures designed to deal with it. Let us begin with a consideration of the socialization and adjustment processes. We are all born into a society and an environment that is a going concern at the time of our arrival. We do not become members of society by "instinct" nor by a chronological process of biological maturation. The process of developing a biological organism into a human being who is adjusted to society is called socialization. Socialization is a complex series of ordered social and psychological events played out in a physical environment, a family group, an economic organization, a political structure, a legal system, a religious orientation and the pre-existing communications channels of an on-going community. With so many variables entering into the socialization process it is a far greater wonder that the overwhelming majority of men become reasonably well

adjusted to society than that a few do not.

No one would assert that the socialization process is without difficulty, or that life is easy. All men experience the "*sturm und drang*" of their formative years, and sooner or later come to understand, with Longfellow, that "life is real, life is earnest." Some would go as far as to agree with Thoreau that "most men lead lives of quiet desperation." In the process of adjusting men to the world and society, the three major sources of difficulty are the incessant struggle with nature, the fact that men change and grow older and the conflict of interests among men, whether in the family, the community or internationally.¹⁵ The first two are inevitable in any case and, whether we choose or not, we must adjust to them. It is in the third source of difficulty, the general area of human relations, that men appear to have a choice in their mode of adjustment. This apparent choice in modes of adjustment may serve as a framework for viewing the problem of drug addiction in contemporary American society.

Pure adjustment types are exceedingly rare for most men work out a compromise between the tendencies in their nature and the world around them. Nevertheless, two broad patterns may be discerned in the processes of social adjustment as men work out their relations to others in the world. Men either strive to change the outer reality or try to achieve a change in themselves in order to alter their experience of that outer reality. Those who strive to change the outer reality are the "activists," while those who try to achieve a change in themselves are the "retreatists."¹⁶ The latter work with thought systems or manipulate their own sense perceptions in order to change the way the world and others are experienced by them. One sub-class of this style of life are the retreatists who manipulate their own sense perceptions by chemical means, and into this sub-class we may place the drug user.

The whole class of persons who influence themselves by chemical means and thus can be said to have made a chemical ad-

justment to the world and society, to a greater or less degree, is really much larger than most people suspect. Although the relatively pure chemical adjustment types include the drug addict and the alcoholic, others who share this mode of adjustment are: the social drinker, the person who resorts to pep pills or tranquilizers, the insulin-dominated diabetic, the barbiturate user, the inveterate nicotine and caffeine consumer, the habitual laxative and aspirin taker, those who place reliance on tonics and pain-killers, asthmatics with their inhalators, and a large variety of persons on maintenance doses of medicine, as in the case of incurable or terminal diseases. The difference between all these persons on the one hand, and drug addicts on the other, is merely a *difference of degree and not of kind*. Their differences are quantitative, not qualitative.

In the light of history, geography and the struggle for political power, the classification of one or the other of these chemical means of adjustment to life as legal or illegal seems quite arbitrary. A generation ago the use of alcohol was illegal in this country and today it is legal. There are parts of the world where the consumption of drugs is unrestricted while in this country the non-medical use of certain drugs is illegal. It is not hard to conceive that if some fundamentalist sects were in a position to define the law, not only alcohol and nicotine, but cosmetics, perfume and dancing would be declared illegal. At least one religious group, were it disposed to do so, would conceivably go so far as to make the use of all medicine illegal, if it was in a position to enforce its convictions as law. The history of heresy and witchcraft on the one hand, and the history of slavery and insanity on the other, find peculiar parallels in the history of alcohol and drugs and their variable legal and illegal status.

In mid-twentieth century America the use of certain addictive and non-addictive drugs for non-medical purposes is, of course illegal. Neither marihuana nor cocaine are addicting in the same sense as heroin or,

indeed, alcohol, but both are illegal. In recent legislation on narcotics there has been a strong tendency toward vagueness and generality. They are now spoken of under the more general heading of "dangerous substances." Just what purposes such lack of specificity is supposed to serve is unclear, but such a usage of terms is somewhat reminiscent of the way in which the political distinctions between liberals, socialists and communists are blurred by right-wing reactionaries under the more inclusive label of "the red menace." This political analogy is not simply a peculiar sidelight on the legal terminology related to narcotics but is only one element in an even more unusual political overtone to the legal prohibitions against narcotics that is shared by only a few other laws.

Until a 1962 Supreme Court decision¹⁷ declared to the contrary, not only the possession and sale of narcotics was prohibited, but the very state of being an addict was, in itself, illegal in a number of jurisdictions in this country. When we consider the criminal law in general, we note that it addresses itself to *acts*, i.e., to what people do or fail to do, not to *states of being*, i.e., to what people are. Thus, for example, it is illegal to engage in larceny, gambling or racketeering, but it is not illegal to be a thief, a gambler or a racketeer. If it were illegal, for example, to be a racketeer, such persons could be arrested on sight and the police would not have to keep them under surveillance until they "did something." Apparently, this distinction between acts and states of being seems to imply that in some cases the law is too impatient to wait for a criminal act but, rather, considers some classes of persons "dangerous" as such.

The classes of persons, beside the recently exempted drug addict, who do not have to commit an act, but simply have to exist, in order to be prosecutable, are an odd-lot of declassed persons in our society who enjoy no power, wealth or prestige: vagrants, drunks, the common prostitute, homosexuals, "incorrigible" juveniles and

aliens. Escaped slaves and the insane have only recently emerged from a similar legal status, and their more remote ancestors were the witch and the heretic. The tendency to generalize from specifiable drugs to "dangerous substances," like the tendency to generalize from specifiable acts to whole classes of persons, would seem to indicate that legislation in these fields is an exercise of social power rather than social justice. It also happens that the civil rights of vagrants, drunks, prostitutes, homosexuals, juveniles, aliens and drug addicts are, for practical purposes, extremely tenuous.

Ever since the passage of the Harrison Act in 1914, a great struggle has been going on between schools of thought based on strong convictions as to how the problem of drug addiction should be dealt with as a matter of public policy. These two schools of thought may be characterized as punitive and therapeutic in orientation. The punitive school, whose prototype is the Federal Bureau of Narcotics and the numerous state and local authorities who have followed the FBN "fundamentalist line," believes in rigid enforcement of the law and severe penalties as a deterrent. The therapeutic school, whose prototype is the Joint Committee of the American Bar Association and the American Medical Association on Narcotic Drugs¹⁸ and a sizeable group of social scientists who go beyond their recommendations, believes in treatment and public health measures as a control. Both agree that drug addiction is a serious problem for which a rational society ought to find a satisfactory resolution. As indicated previously, however, even the most basic facts about the epidemiology of drug addiction are either in dispute or simply unknown at present. The historical aspects of this epidemiology are no better, but they have been "used" to make a case for the effectiveness of the punitive school.

Some of the early estimates of the addict population in the United States vary between 264,000 in the period before 1900 to 110,000 by 1910,¹⁹ but this estimate was

criticized as being too low by the best historians of the subject in 1928.²⁰ For reasons that are not altogether clear, the Federal Bureau of Narcotics estimated 152,000 addicts in 1900, 200,000 in 1914, then began the famous "ski jump curve" down to 19,000 addicts in 1946, and a slow rise again to what was earlier called the most widely known and believed estimate of 50,000 to 60,000 addicts in 1955.²¹ This fantastic historical pattern has been so thoroughly demolished by Lindesmith²² that it may well disappear from future FBN publications. One thing is clear, as long as addicts are driven underground by legal prohibitions we will never have anything but inadequate indices to the extent of the problem. A further corollary to this species of a guess-work numbers game is that the higher the earlier "estimates" of the number of addicts, the easier it will be to demonstrate improvement or "success" in coping with the problem; for all subsequent, more accurate, counts when compared to an earlier high erroneous estimate can be "claimed" as demonstrating the effectiveness of *what-ever* methods happened to be used in the intervening period to cope with the problem. These methods were, of course, the punitive methods of the FBN and its imitators. Such claims are like the official claims of growth in the Russian economy: since no one knows what the base figures are, no one can interpret what a claim of 15 per cent growth in Soviet production means; but it always sounds good!

A somewhat similar difficulty arises when we try to determine the effects of punitive legislation on the extent of addiction or violations of the drug laws. After the Daniel and Boggs hearings of 1955 and 1956, many states increased their penalties for narcotics violations, including death sentences in some cases for recidivist sellers to minors.²³ When such punitive legislation goes into effect one may always safely predict that the number of narcotic violators, *convicted as such*, will decrease in subsequent years. This fact is not a demonstration of the efficacy of puni-

tive measures, however; more likely it is the practical neutralization of such legislation. When penalties become more severe the police exercise more discretion, charges get changed, and it becomes more difficult to get indictments and convictions. In the bargaining process of justice, what might have been a charge of selling drugs to a minor, with a possible life sentence, is simply converted to a charge of contributing to the delinquency of a minor with a penalty of a year in the county jail. Such a conviction is much more readily attainable with a lot less work, expense and time for all concerned. The same thing is true, and with far greater frequency, in the case of lesser offenses like illegal possession or use of drugs. Neither judges, juries nor even state's attorneys, are eager to send addicts to prison in the full knowledge that no treatment facilities for addiction exist there. Instead, the informal bargaining system of justice results in a change from felony to misdemeanor and a consequent sentence of 3, 6 or 12 months in the county jail. This is also a futile gesture for no treatment facilities exist there either, but it has the appearance of a lesser futility. All in all, such a reaction to more severe penalties for narcotics violations will always be reflected in the "official records" as fewer narcotics convictions, and this is fixed upon by the proponents of punitive measures as "deterrence." It is difficult to determine just who has been deterred from what here, but all it means is that the addicts who would have been convicted and put in jail or prison as sellers, possessors or illegal users last year, are convicted and put in jail as disorderly persons, pick-pockets or larcenists this year. Such practical neutralization of severe penalties results in what Lindesmith calls "a pleasant statistical mirage."²⁴

The therapeutic school of thought is divided between those who believe that treatment is possible within a punitive setting, like a jail or prison, and those who favor treatment on an out-patient basis in the free community. Among the former are what might be considered "en-

lightened politicians" who are trying to be all things to all men in that they are trying to please both the treaters and the punishers. The notion that there can be a "therapeutic corner" in a punitive institution is a figment of the public relations mentality.²⁵ Just as we do not train pilots in submarines so can we not treat sick persons in facilities designed to inflict pain. It is difficult enough to handle essentially normal criminal populations in the traditional prison setting, and to release them no worse off than when they were committed, without introducing emotionally disturbed and sick populations into the punitive setting to the detriment of both the well and the sick. If certain residential institutions could be set aside, specifically designed to deal with drug addiction (as is the case with the Federal Hospitals at Lexington and Fort Worth), such a venture might have higher hopes of success than jails and prisons. The performance of even these Federal Hospitals, however, does not lend much basis for optimism for their success rates with addicts are less than 20 per cent.

Apparently, the state of confinement, as such, is a poor environment for any kind of therapeutic endeavor. We are learning this the hard way with our institutionalized populations who are classified as mentally ill, and there is a "progressive movement" that is promoting "community psychiatry" on an out-patient basis for large segments of the mentally ill who would formerly have been committed. The out-patient treatment branch of the therapeutic school of thought on drug addiction views the history of mental health treatment as the shadow that coming events cast before them in the field of drug addiction treatment, and feel that as long as drug addiction, like insanity in the past, places the addict beyond the pale of legitimate society, very little that is constructive can be done about the addiction problem and its attendant social and economic ramifications.

Considerations of this kind, combined with the conception that the drug addict

is essentially a sick person rather than a criminal, leads many members of the therapeutic school of thought to recommend the legalization of drug consumption under some form of government monopoly and control, with treatment and distribution handled through private medical channels. The model for such a proposal is the system practiced in England²⁶ (and, with minor variations, in other European countries) where, under government control and through private medical channels, drug addicts are treated or, if cure seems improbable after a conscientious effort, placed on a maintenance dose of narcotics without the intervention of law enforcement or punitive authorities. The effectiveness of this system, which has been practiced there since 1920, is demonstrable on the basis of a few simple facts: at the beginning of 1965, according to the FBN,²⁷ the United States had 55,899 addicts in a population of about 190,000,000; and in England,²⁸ at the same time there were 635 addicts in a population of about 55,000,000. Thus, with a population less than $3\frac{1}{2}$ times that of England, *we have 88 times as many addicts* as they do. Such apparent efficiency in dealing with the problem of drug addiction certainly bears investigation and should not be dismissed with contempt by the agency in this country that is charged with the responsibility for coping with the drug problem.²⁹

This attitude of contempt, and the ideology and practices it is meant to rationalize, is the main cause of the futility in our present public policy to cope successfully with the problem of drug addiction in the United States. No one questions the fact that the problem of drug addiction in this country is a serious one. It has baffled those who would oversimplify the problem; it has thwarted those whose impatience led them to take drastic punitive measures; and it has exasperated the more rational among us to watch the frightening spectacle of ignorance in action as the oversimplifiers and punishers aggravate the very problem they are trying to solve. There are few who would dare to pretend

that our present public efforts to solve the problem are anything but inadequate. Some would go so far as to say that the whole of our present public policy with regard to dealing with drug addiction is beside the point. This is not to say, however, that it does not serve some purposes. For one thing, it is designed to create the illusion that something is being done while the objective facts of incidence and recidivism constantly belie this illusion. Thus, the negative measures of arrest, trial, conviction and severe punishment are *designed to comfort the public* rather than to deal with the problem of drug addiction as it confronts us in the community. Man's capacity for sustaining an illusion may be large, but this illusion disintegrates faster than it can be propped up with public relations and irrelevant measures.

A basic and radical change in our approach to the problem of drug addiction is not only necessary but inevitable. I disagree with those who would make this change in terms of an increase in police controls and more severe penal sanctions. This is simply to pile irrelevancy on irrelevancy and enough public monies have already been poured down the rat hole of negative-punitive policies. We believe that the present approach to the problem of drug addiction has failed because it rests on a false major premise, namely, that addiction is a crime to be punished rather than a sickness to be treated. The great American criminologist, Frank Tannenbaum, drew the consequences of this false premise: "Somewhere there is the assumption that by doing evil to the evil-doers we shall achieve good ends in the person so treated. . . . There is not a shred of evidence that punishment—severe or mild, with good intentions or bad ones—has beneficial effects on the future lives of men punished. If experience proves anything, it proves the opposite. It proves that evil, even when done in a good cause, has evil consequences."³⁰

The proponents of constructive and positive proposals for dealing with the drug problem have had neither the opportunities

nor the resources and public outlets that the adherents of punitive policies have had. In a recent study of California legislators the question of where they got their information on the drug problem, and why they paid so little attention to doctors and social scientists on this question, was explored. One legislator commented as follows: "I've never received any *unrequested* information from any university or research faculty; I get only pressure from the police, and pamphlets from the Federal Narcotics Service."³¹ Those who have opposed the negative-punitive approach of the FBN and its local-State counterparts, have been vilified and maligned by the public relations organs of the major enforcement agencies. One FBN publication commenting on the report of a Joint Committee of the American Bar Association and the American Medical Association was so vehement in its denunciation of eminent lawyers, doctors and social scientists that a year after its publication—after the damage was done—a number of slurring remarks had to be deleted from the text.³² Apparently, the proponents of the punitive approach to the problem of drug addiction feel that their policies cannot withstand public scrutiny and inquiry in a democratic society and thus seek to suppress opposing points of view. When the community is troubled and is seeking effective measures, there should be free and open debate, and a variety of experiments, so that alternatives can be judged on their merits.

Although the illegal manufacture, importation, distribution and sale of addicting drugs is properly a matter for law enforcement and the courts, this is a separate matter from dealing with the question of drug addiction. By treating the drug addiction problem as the epidemic that it is, and by establishing a medical system, under proper control, to treat it as a *medical or public health problem*, the following short and long-term benefits could be expected to result: (1) the underground reservoir of illicit drugs would virtually disappear as it has in England

because the profit incentive to this form of racketeering could no longer result in a flourishing black market; (2) by redefining addicts as sick persons rather than as "cool cats" and rebels, a psychological deglamorization of this form of conduct would take place among the young, reducing the volume of recruitment among those who are persuaded that participating in illegal activity confers status on them; (3) perhaps as many as 50 per cent of the present addict population would seek withdrawal and abstinence help because their addiction ceased to be an underground experience fraught with the dangers of infection, arrest and ostracism, but was now recognized as a pathological condition; (4) potential addicts would have no illegal source of supply and could turn to medical and psychological specialists who could undertake treatment of addiction-prone personality types; and (5) as the present generation of addicts were successfully withdrawn, "matured out," or died the problem of drug addiction would finally be under control.

There is opposition, of course, to this kind of a proposal by more than a misled and bewildered public. The illicit foreign producers, the international smugglers, the syndicate racketeers and the non-addicted distributors and sellers of addicting drugs would all lose their means of livelihood and profit. All of these parasites are far more dangerous than the *addict-victim* of their trade, but they flourish under the protection of the present punitive policies. This head-in-the-sand attitude is tragically reminiscent of the unwitting, but nonetheless unholy, alliance of temperance people, bootleggers, gangsters and law enforcement agents during the Prohibition era. If the Federal Bureau of Narcotics, and the variety of law enforcement agencies who adhere to such punitive policies, fear that their budgets and staffs would be reduced under a medical or public health system of dealing with drug addiction, they may be reassured that there is still a positive function for law enforcement. They can still guard our borders against illegal im-

portation, police the distribution channels against illegal diversion of drugs and deal with the possibility of extortion, graft and corruption that may enter into the fringes of such a system. Such a role would not only give law enforcement a constructive character but would contribute to the ultimate solution of the problem, which, we assume, has been their real objective since passage of the Harrison Act in 1914.

In the period 1919 to 1923, some 40 clinics for the ambulatory treatment of drug addicts were established in this country to deal with the consequences of the passage of the Harrison Act. Literally thousands of addicts had been deprived of their regular source of drug supplies and the "criminalization" of what had heretofore been considered a form of social deviance was not yet widespread. At least one of the motives in establishing these clinics was to prevent such criminalization of what had been, by and large, an addicted but not criminal population. The results of this early experiment are still a matter of heated debate,³⁶ but there is general agreement that they were hastily organized, poorly controlled and lacking in a unified concept of drug addiction and how to deal with it. In recent years several proposals have been made for "limited" retrials or pilot projects to organize clinics for the ambulatory treatment of drug addicts in certain localities. The most authoritative of these proposals was presented in 1958 by a joint committee of the American Bar Association and the American Medical Association.³⁷ Somewhat similar proposals had been made earlier by Dr. A. E. Eggston of the New York State delegation to the A.M.A., by the New York Academy of Medicine and by the Citizens' Advisory Committee to the (California) Attorney General.

It would appear that any proposal for the controlled administration of drugs to addicts, whether handled through private medical channels or through a clinic plan, and whether for withdrawal and treatment purposes or the issuance of maintenance doses for cases not amenable to treatment,

must be planned for on a *nationwide* scale. Pilot projects or experiments on a local basis, although designed to meet Federal-State legal issues, and perhaps designed to meet the fears of an uninformed public, are really courting the conditions that will, in the short run, contribute to their *apparent failure*, for they take no account of the mobility and migration of addicts.³⁸ If drugs can be obtained legally in one jurisdiction and not in another, the situation with addicts will be like the situation of gamblers who go to Nevada or drinkers in dry states who go to wet states for their supplies. Any proposal for the legal administration of drugs must be nationwide, strictly controlled and well-policed. The Public Health Services of the United States, working through the American Medical Association and its State and local branches, down to the private physician level, in cooperation with the Federal Bureau of Narcotics and local law enforcement agencies as the policing arm (with some in-service training for this new and positive orientation) would be a likely treatment and administrative structure to ensure the success of such a program.

This medical and policing program is precisely the system adopted by the late Harry J. Anslinger, Commissioner of the Bureau of Narcotics in the case of an addicted Washington society woman and an addicted Congressman. The former he slowly withdrew through the use of decreasing dosages, the latter, who was recalcitrant, he put on a maintenance dose until his death.³⁹ Over the past 50 years the legal profession has largely abandoned the drug addict to the policeman and the jail administrator, neither of whom could do anything about his basic problem. The medical profession, too, has largely abandoned the addict because they have been intimidated by ambiguous law enforcement practices. It is time that the medical profession reasserted itself in the light of the Linder case,⁴⁰ in which the Supreme Court upheld their right to practice medicine, even when the patient was a drug addict. It is neither sound medical practice nor

good citizenship in a free society to have policemen diagnosing illnesses, courts setting forth treatment plans, jailers implementing treatment and legislative bodies deciding who shall be defined as sick or well.

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Sociology of addiction

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IT IS IMPOSSIBLE for me to summarize the work that sociologists have done in the field of addiction both because there is too much of it and because there is a great deal of disagreement and controversy. What I should like to do, therefore, is to present a brief and very general sketch of the position and social world of the American drug addict of today and to indicate some of the policy implications that seem to be involved in the narcotics situation as it has developed historically in this country.

Since the 19th century there has been a dramatic and drastic change in the social

status of the addict, in his way of life and in the nature of the narcotic problem in this country. This change occurred after, and largely as a consequence of the Harrison Anti-Narcotic Act of 1914. Prior to that time addiction was generally viewed as a personal problem and the opiate addict was regarded much as alcoholics are today, that is, as a person to be pitied rather than punished.

With the enactment of federal anti-

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narcotic measures, not only did the addict come to be viewed as a social menace and a criminal, but a new type of addict began to appear and to replace gradually the old 19th century type. These new addicts, with whom we are now all too well acquainted, are characteristically young urban males, often from minority groups, recruited largely from big city slums. As is well known, during the 19th century most addicts were women, the average age was much higher, and the method of recruitment was very different. As Mr. Mattick¹ has dealt with some of these matters in greater detail, I will content myself with one reference which makes my point. In 1913, the year before the Harrison Act, there was a registration and rationing system for addicts in Tennessee. It was noted of the several thousand who were registered, that the average age at which the habit was acquired was 37 years, that the average age of the registered users was 50, and that Negroes were under-represented in proportion to their numbers in the Tennessee population.

In contrast to the 19th century type, the addict of today is ordinarily a social pariah, an outcast and virtually an outlaw. This degradation of the addict's social status came about through the changed legal situation and by virtue of the fact that addicts, after the Harrison Act, came to public attention mainly through being processed in the criminal courts, jails and prisons. There is perhaps no more effective means of stripping a person of his standing in a respectable society than to subject him to what may be called the "degradation ceremonies" of a public criminal trial. Persons who go through this process tend to be stigmatized permanently even when they are not addicts. The double stigma of addiction and criminality is even more severe and lasting.

Persons who are publicly labelled as social outcasts tend, under certain circumstances, to draw together to form subcultures or sub-groups in the underworld, as the addicts have done. The social structure within which the underworld addict

operates includes the illicit traffic in drugs from which he obtains his supplies, the police who seek to apprehend him, and the illegitimate occupations from which money is obtained to buy drugs.

Outstanding and significant features of the addict's social world are its underground, secret character, and the self-perpetuating nature of the sub-group. The illicit traffic which keeps existing addicts supplied, also makes for availability of drugs in certain segments of the population which contribute the bulk of the new crops of addicts appearing each year. The habit spreads in secret; that is, in personal relations which are largely beyond the reach of the criminal law and which are usually not known about (if ever) until after the fact, that is, until a new addict is detected.

Narcotic offenses constitute an unusual kind of crime in that there is characteristically no victim, or no complaining witness who willingly reports to enforcement authorities that he has been victimized. This fact has interesting implications. It means that in order to enforce the laws, a substitute must be found for the complaining victim. It is at this point that the addict performs one of his few positive functions in our society. It is from the addict acting as an informer that enforcement authorities secure much of the information and cooperation that is vital to them in attacking the illicit traffic. The addict-informer usually engages in this activity under pressure arising from arrest and the threat of punishment.

Addict informers are not only useful adjuncts in the enforcement of narcotic laws, but they may be very helpful in other areas as well, such as burglary, receiving stolen goods, shoplifting and other types of criminal activity in which addicts are involved or of which they have knowledge.

It is possible that this positive function of the drug user in law enforcement may have had something to do with the gradual disappearance of the idea that the drug peddler is the criminal in this game, and

that the addict is the victim whom the law is supposed to protect. Another contributing influence, of course, has been the fact that addicts are also often drug peddlers.

There is a curious contradiction involved in the fact that the prosecution of addicts seems to be an indispensable feature of the attempt to suppress the illicit traffic. This contradiction arises from the long standing doctrine of the federal courts that addiction is not a crime but a disease, a doctrine first announced by the U. S. Supreme Court in 1924 in the Linder Case. If this doctrine is considered logically, it appears strange that the victims of a disease should be prosecuted and punished to get at the non-addicted racketeer-smugglers and distributors who are exploiting him for mercenary gain.

I and others have argued that it is bad social policy for a society to stigmatize its members unnecessarily by subjecting them to the apparatus of the criminal law when other milder alternatives exist. Over-extension of the criminal law into areas in which it is inappropriate often tends to back-fire, by creating new evils greater than those it seeks to control, by artificially transforming respectable citizens into law violators, and sometimes by creating disrespect and hostility toward the law itself. In addition to the opiate drug problem, the noble experiment with liquor prohibition is an illustration. I think that the extreme severity of the penalties connected with marihuana is another example. Although I have not studied the new laws on barbiturates, amphetamines and other so-called "dangerous drugs," it appears possible if these laws are not wisely enforced, that they could have the effect of creating an army of new criminals with a stroke of the pen.

The fact that the drug addict lives in a separate, secret world of his own, removed from the wider society, has had the unfortunate effect of creating widespread public ignorance of addicts and addiction. Much popular and legislative thinking has been and is still based on mistaken ideas and oversimplified stereotypes disseminated

by agencies of the mass media that are more concerned with drama and sensationalism than with accuracy. It is extremely difficult, even for specialists, to know just what is going on in the world of narcotics.

Basic reform proposals now being discussed are generally designed, one may say, to pull the addict, who has been ejected from respectable society, back into it. A central aim of these proposals is to avoid the stigma and degradation imposed by the criminal law on those it processes. The idea of civil commitment clearly has this end in view. Controversy concerning civil commitment tends to focus on *compulsory* civil commitment which is criticized on the grounds that, being compulsory, and involving loss of liberty, it is *civil* in name only and criminal in fact.

The other major plan for bringing the addict back into society, proposes that the medical and allied professions be given greater freedom of action in this area, or in other words, that the Supreme Court's doctrine that the addict is a proper subject of medical care, be more or less accepted as it stands, and that the primary responsibility and authority for treating and handling addicts be transferred from law enforcement to the medical profession as in the case of disease generally, and as is done in many foreign countries. This is the plan that I have advocated. It has also been advocated by some medical bodies in this country such as the New York Academy of Medicine.

In connection with this proposal, it should be observed that, because of the atmosphere of secrecy, danger and illegality which now shrouds this subject, relatively little is known of those addicted persons who are presently being taken care of medically and who do not, consequently, appear in the criminal courts. It is thought that these persons are often from the upper social classes like the addicted member of Congress who was permitted by the former head of the Federal Bureau of Narcotics to secure legal drugs from his physician until he died. Others are no doubt members

of the medical profession in which addiction is characteristically and understandably more common than in other occupational groups.

Since addicts of this type rarely appear to constitute any sort of social menace or problem, the systematic collection and publication of information about them could be of considerable importance in the current public debate. If some addicts can be successfully handled this way, perhaps more can be. There is basic lack of logic and of justice in handling upper class addiction in one way and lower class addiction in another.

What seems especially urgent today is that the medical profession and scientists

generally be given greater freedom to investigate and to experiment with a variety of programs for handling addicts. During recent years there has been, I think, a noticeable decrease of danger and increase of freedom in this respect. Experiments now going on in New York and elsewhere are indications of this. If this trend continues it seems reasonable to suppose that the United States may ultimately convert its huge drug problem into a positive asset by contributing to a wiser and more effective handling of addicts everywhere.

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Recent developments in the chemistry and biochemistry of narcotics

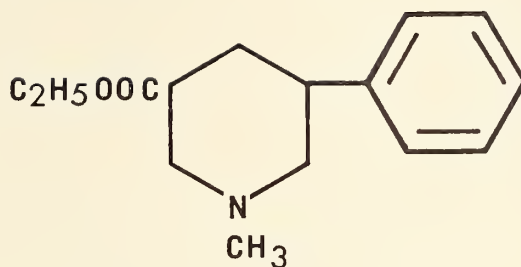
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THE SEARCH FOR ANALGESICS which are more potent, less toxic, and devoid of undesirable side effects, particularly addiction, continues at an accelerated pace. As our knowledge of the relationships of chemical constitution to biological activity improves, the design of new analgesics becomes considerably more rational and efficient. Meanwhile, with the advances in

the area of biochemistry and molecular biology, the time is not too distant when the mechanism of action of the analgesics as well as the molecular basis of addiction can be elucidated. The purpose of this communication is two-fold: 1) To discuss some of the more recent new synthetic analgesics, and 2) To discuss some approaches the biochemist and physiologist are utilizing to elucidate mechanisms.

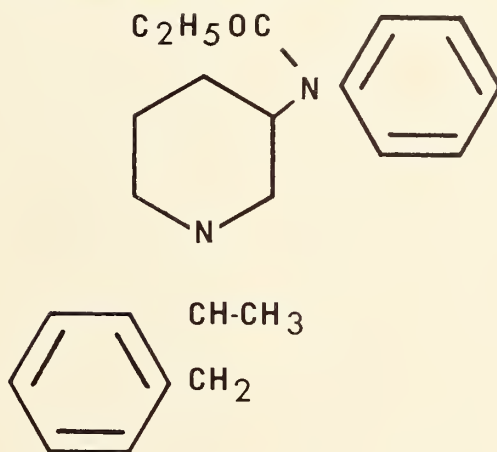
From a chemical standpoint one of the simplest structurally related derivatives of morphine is meperidine:

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I

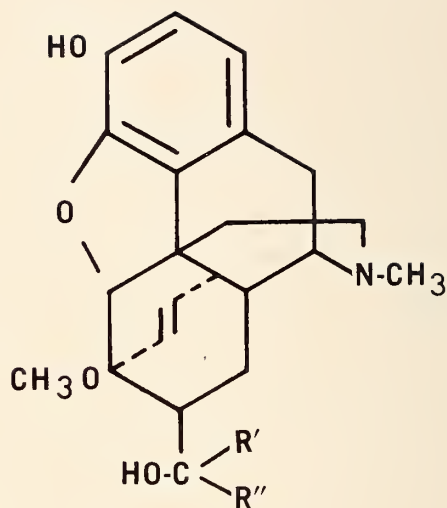
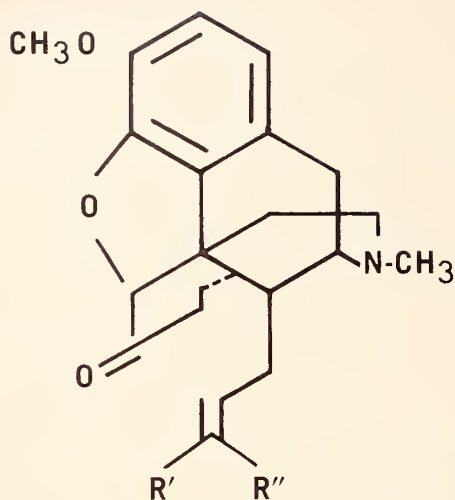
A further variation in the basic structure of I involves the replacement of the phenyl + carbethoxy group by propiono-aniline, while the methyl group of the piperidyl N is replaced by phenylisopropyl:



II

This compound is 3000 times more potent than morphine as an analgesic. It is, however, highly addictive.

Starting with a thebaine, one of the constituents of the opium alkaloids, Bentley and Hardy have synthesized a group of analgesics which are up to 10,000 times more potent than morphine:



III

where R' and R'' are alkyl groups (e.g., methyl, ethyl, etc.)

From the point of view of addiction liability such potent analgesics would appear to present insurmountable difficulties. In the morphine series the addiction liability is proportional to analgesic potency; however, one is hopeful that, with the potent synthetic analgesics, addiction may be less of a problem.

In spite of the fact that addiction is a widespread and costly menace, it has received relatively little attention from basic scientists concerned with the underlying mechanisms of biological processes. The reasons for this lack of interest are not clear, for the problem of addiction is a very basic one whose investigation may shed light on such fundamental biochemical problems as enzyme adaptation and other forms of molecular modification of biological systems. Addiction can occur by a number of mechanisms: 1) An enzymatic adaptation may have resulted which requires the narcotic as a substrate, coenzyme, or co-factor; 2) The narcotic itself is substituting for a basic enzymatic or other essential biochemical process which has been so suppressed that it cannot suddenly become functional upon withdrawal of

the narcotic; 3) The narcotic is serving in the role of a chemical transmitter (inhibitory and/or excitatory) or, by affecting an enzyme, may be influencing the concentrations of endogenous chemical transmitters.

Recent biochemical studies have indicated that morphine and related derivatives interfere with nucleic acid synthesis, by inhibiting RNA precursors. A modification in RNA metabolism can result in enzymatic adaptation, activation or suppression. Other studies have indicated that the morphine-like narcotics inhabit electron transport systems in respiratory metabolism and can, thereby, interfere with energy synthesis in the cell. Still other studies suggest that morphine and related derivatives may actually substitute for certain enzymes in the electron transport system.

Many interesting avenues of approach to understanding the mechanisms of narcotic addiction are beginning to appear, and the area is ripe for intensive investigation by basic and clinical researchers. One approach that appears particularly promising in light of our extensive knowledge on the biochemistry of the red cell is to conduct a thorough study of red cell metabolism of the addict.



The pharmacology and physiology of drug addiction

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THE TITLE OF THIS STATEMENT would seem to imply that a great deal is known about the mechanism of drug addiction and about the pathophysiological processes involved in drug addiction. The word *pathophysiological* is used advisedly, for drug addiction is indeed a disease. The true status of our knowledge regarding drug addiction is now as it has always been, i.e., a mystery. Much is known of the pharmacology of these agents but the exact mechanisms of addiction, and even analgesia, continue to be elusive.

It has often been stated that morphine, as a prototype of all potent narcotic analgesics, is rated among the 5 or 10 most important drugs in the practice of medicine. Paracelsus, in the 15th century, described opium as "the stone of immortality" and Sydenham later stated that no other drug known to man was so universally efficacious. Today it is common knowledge that narcotic analgesics cure no diseases but are indeed the most potent "masking" agents known. They differ chiefly from tranquilizers in that tranquilizers may induce a calming effect or a feeling of well being but without appreciably altering the perception of pain.

In general the pharmacological effects of opiate analgesics are characteristic of all potent narcotic analgesics, synthetic as well as semi-synthetic. They all share the

common property of alleviating severe pain, allaying apprehension or anxiety and inducing a sense of euphoria in most subjects in severe pain. The euphorogenic activity appears to correlate well with their addictive potential.

Pharmacological Effects

Narcotic analgesics exhibit a variety of pharmacological actions on almost all organ systems, either directly via autonomic integrations or via central nervous system effects. Actions on structures other than the nervous system do not appear to be related to the analgesic or addictive effects of these drugs.

It can be demonstrated in both laboratory animals and in man that narcotic analgesics elevate the pain threshold. Based upon the current knowledge of the physiology of pain and pain perception, what is usually described as an analgesic effect of narcotics does not seem to result solely from an elevation of the pain threshold but from a summation of several pharmacological effects, including a reduction in anxiety, apprehension and an alteration in one's reaction to painful stimuli. It is well known that the pain threshold may be modified by a variety of factors such as time of day, the degree of fatigue and the

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emotional status of the individual. These and, perhaps, other factors seem to play important roles in defining the pain threshold and also possibly determining the magnitude of response to narcotic analgesics in patients not tolerant to such drugs.

The most obviously pronounced effects of narcotics are manifested on the central nervous system. In addition to dulling the sensations to pain they produce drowsiness, mental cloudiness and mood changes. In the presence of severe pain and anxiety they often induce euphoria or a feeling of well being in doses of only 5 or 10 mgm administered subcutaneously. In the absence of pain and/or anxiety these same doses may cause discomfort or dysphoria, especially in the novitiate. This is characterized by fear, apprehension, nausea and sometimes vomiting, marked lethargy, a feeling of excessive heaviness of the extremities and a feeling of warmth and itching. Itching is thought to result from the action of such narcotics as morphine to liberate histamine and occurs most often in the face. If undisturbed the individual may fall asleep, during which time vivid dreams usually appear. In contrast to the action of sleep-inducing doses of barbiturates the patient may be aroused easily from sleep brought on with therapeutic doses of opiates and opioids. The psychopharmacological effects of narcotics may last considerably longer than the analgesic actions, which are usually over within 4 to 6 hours.

Morphine, heroin and similar narcotics, in contrast to barbiturates, may cause central nervous system depression without inducing either slurred speech or motor incoordination. The addicted subject may appear to be grossly normal. Like the barbiturates and alcohol, however, narcotics characteristically depress respiration and acutely lethal doses cause death by respiratory paralysis.

Some of the other central nervous system effects of narcotics include pupillary constriction and a disturbance in the body heat regulatory mechanisms so that the temperature may fall. These effects may

be seen with therapeutic doses. Miosis is characteristic of morphine or heroin poisoning or addiction and is often accepted as suggestive evidence for such. Methadone may also produce pupillary constriction while mydriasis usually results from the administration of meperidine. The pupillary effects of opiates and opioids are thought to be central in origin.

While the predominant effects of narcotics on the central nervous system are depressant they may also cause excitatory responses. Large doses of morphine may produce strychnine-like convulsions in the dog. These excitatory responses have been attributed to a direct spinal cord stimulating effect but recent evidence suggests that such stimulation may be supraspinal in origin. In some animal species the excitatory effects dominate, notably in the cat, horse, pig, sheep and several other lower animals. Occasionally opiates may cause marked excitation or mania in man as an idiosyncratic reaction. Codeine and meperidine are generally more likely to cause central nervous system stimulation than morphine in man and muscular twitching and convulsions may occur, especially in the very young, from excessive doses.

Tolerance and Addiction

Narcotics and other addicting agents characteristically induce tolerance if such drugs are taken repeatedly and at proper intervals. On the other hand, many other drugs may exhibit the phenomenon of tolerance without the slightest suggestion of addiction or physical dependence. *Addiction* is characterized by an overwhelming craving for a given drug, the absence of which resulting in physical withdrawal symptoms. This is in contrast to *habituation* or psychic craving for a drug, the absence of which not resulting in physical withdrawal symptoms. In both drug tolerance and addiction it becomes necessary to use gradually increasing amounts of the agent in order to obtain comparable magnitudes of response. True addiction may result also from the prolonged and continuous use of excessive amounts of alcohol, barbiturates,

tranquilizers and a variety of other central nervous system depressants. Physical dependence or addiction may also occur from the similar use of such central nervous system stimulants as the amphetamines. Cocaine, on the other hand, while causing a feeling of elation and a relief of fatigue, does not cause physical withdrawal symptoms. By pharmacological definition, therefore, it is not truly addicting. Tolerance is a common occurrence with both the narcotic and non-narcotic addicting agents. The degree of tolerance may be of such magnitude that many times the initial lethal dose may be consumed with impunity. Tolerance and/or physical dependence constitute the major limiting factors for the clinical use of narcotic analgesics, barbiturates and to a much lesser extent certain tranquilizers. Tolerance does not occur to all of the pharmacological actions of these agents. For example, the opiate addict may continue to display pinpoint pupils in the face of a marked degree of tolerance to the central nervous system depressant effects.

Cross Tolerance

The phenomenon of cross tolerance is well known, i.e., the ability of another drug, sometimes chemically unrelated, to allay the withdrawal effects of the addicting drug. For example, methadone can easily be substituted for heroin or morphine. In varying degrees this is generally true for the entire class of narcotic analgesics. In man barbiturate withdrawal symptoms can be partially ameliorated by alcohol. Cross tolerance has also been demonstrated within the group of central nervous system depressants such as meprobamate, paraldehyde, chloral hydrate, chlordiazepoxide and similar central nervous system depressants.

Mode of Action of Narcotic Analgesics

The exact mode of action of narcotic analgesics is poorly understood. It can be demonstrated that they elevate the pain threshold in both laboratory animals and in man. The total analgesic response, however, appears to be a summation of several

pharmacological effects in addition to dulling the sensations to painful stimuli. The actions of narcotics to allay apprehension and to induce a feeling of well being in the presence of pain may constitute important aspects of the total analgesic effect. The mechanism of tolerance and addiction is even less well understood. It has been postulated that tolerance is a manifestation of tissue adaptation. One of the outstanding attributes of the living cell is its adaptability. For example, certain microorganisms can adapt to the presence of several hundred times the initial lethal concentration of some chemotherapeutic agents, and indeed may even become dependent upon them for normal growth. It has also been suggested that tolerance and, perhaps, addiction to morphine and similar narcotics occurs as a result of the action of such agents on certain enzymes. The enzymes are thought to be initially inhibited by the narcotics but are produced at an increased rate following chronic exposure to such drugs. When the drug is withdrawn the excess enzyme manifests itself by withdrawal symptoms, i.e., symptoms opposite to those of the initial effects of the narcotic. Others have postulated that narcotics may increase the synthesis of catecholamines in the central nervous system. It is thought that norepinephrine subserves an important function as a neurohumoral transmitter in the brain and in the spinal cord. It acts in association with other neurohumoral transmitters to maintain the normal integrity of the central nervous system and to determine its level of activity. It is conceivable that some of the psychopharmacological effects of narcotics could be mediated in part via such actions on catecholamine synthesis or release. Tolerance to meprobamate, barbiturates and similar agents can be shown to result, at least in part, from an increased rate of enzymatic degradation. Even with these non-narcotic addicting agents cellular adaptation may play an important role in the development of tolerance and, perhaps, also addiction.

Although the exact mechanism of the

events leading to drug tolerance and drug addiction is poorly understood, it appears that in addiction certain cells of the central nervous system actually become dependent upon the presence of the addicting drug.

Withdrawal symptoms seem to be a manifestation of the absence of the agent to which the central nervous system cells have become dependent and have adjusted their level of activity.



Patterns and profiles of addiction and drug abuse

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AS AN OBSERVER OF NARCOTIC and "dangerous drug" use over the past ten years, nothing has impressed me so much as the ecological evolutions, devolutions and mutations of this Hydra-headed social or dys-social force. My exposure came as a result of an assignment as director of a special narcotics project in the Narcotics Court¹. That paper pointed out that, on the basis of a study of apprehended addicts who passed through the Narcotics Court of Cook County, there exists a group of hard narcotic addicts with a *controlled or limited habit* and another group who sooner or later voluntarily withdraw from the addictive ranks. These observations implied that "addiction may be a self-limiting process in at least a percentage of cases." The last statement has usually been credited to Winick,² who drew similar conclusions. My paper brought to professional attention the fact that "the importers and sellers, by adulterating the material to such an extent, may be helping the process of breaking the habit and thus, ironically,

may be reducing their own market."¹ Those same individuals or groups were also quite likely inadvertently altering and laying the ground-work for ecological changes in the nature of the addictive process itself.

Two other points seem worth review. They are vital to an understanding of the process inevitable in the elimination or control of crime, addiction, etc. which may be ultimately only circumscribed rather than eliminated. "There seems to be a proportionate increase in most processes of behavioral deviation almost in accordance with the attention directed at their eradication." The second paradoxically, is that "the larger the structure developed to suppress the narcotic trade and the group called addicts, the larger the population which may be needed to support it."¹

Subsequent to my experiences in the Narcotics Court, I spent six years as the psychiatric consultant to the Sheriff's office and the Cook County Jail. Through that experience, as well as others at the Chicago Psychiatric Foundation, the Board of Health and private practice, I believe that I have had a fairly extensive exposure

The Chicago Board of Health and The Chicago Psychiatric Foundation.

to the problems which drug abuse may present in the City of Chicago.

It is frequently reported, with some truth, that drug abuse and addiction are not respecters of social class, race, financial position and other such factors. It is an error to classify uniformly all self-prescribing drug users as addicts—or even necessarily as “abusers”—although there is certainly a tendency many times in this direction. So varied, complex and changing is drug use, depending on shifting styles of use or abuse, altering availability, the introducing of new agents, changing group structure, membership or mores in one location or different sections of the country, as well as police or legislative intensification, that the picture is a kaleidoscope.

Adolescence and Drug Use

Among those who progressively turn into serious or problem drug users there seems to be a common preliminary tendency to be much too open to the blandishments of “trying something new and different.” This would appear to be an elaboration or distortion of the normal “curiosity” need described by Harlow.³ For some reason, perhaps the general *identity explosion* which occurs in adolescence, hypertrophy of this sense of exploratory fearlessness and immediacy seems to develop in many adolescents. A combination of availability, peer group enticement, the declining of socially acceptable directions, and often an intensive urge for discovering and extending the limits of individual sensitivity and possibilities initiates many youngsters into early drug experiences.

Laskowitz,⁴ after reviewing the many theories and factors in the development of adolescent addicts, seems to conclude also that *non-specificity* rather than specificity regarding psychological structure seems to characterize the current state of knowledge about the development of addiction: “The question of whether there is a predisposing personality pattern that makes for liability to addiction has stimulated papers which reflect a maximum of vigor regarding viewpoint and a minimum of experimental data. Linked with this is the intriguing question

of whether the potentiality for drug addiction exists in all of us, as has been cited for mental illness.”⁴

What is perhaps more important that the particular personality variables are the *initial exposure experiences* of drugs and people. In examining the situation of glue-sniffing in Chicago, it was striking that, according to informants, this was a “bag” or tendency of Mexican-Americans and Caucasians rather than Negroes. This impression was supported by a similar study in Los Angeles.⁵ In that study of 89 juveniles, only seven were Negro, the rest almost evenly divided between Caucasians⁴⁵ and Mexican-Americans.³⁷ In Chicago, according to informants, wine or whiskey was more likely to be used by the adolescent Negro youth, although certainly not exclusively. The Puerto Rican youth were reported to be more likely to use hard narcotics earlier than the other groups.

Some Characteristic Effects of Particular Drugs

Adolescents use alcohol as do adults in that its use often involves aggressive acting out. Narcotic use in adolescents promotes passivity.⁶⁻⁹ The kinds of “highs” experienced by drug users vary considerably and conspicuously. Aggressiveness is fostered by the use of alcohol, barbiturates and to some extent by the amphetamines. Marijuana, morphine and its congeners, as well as the psychedelic agents, tend to produce introspective attitudes, benignity and self-absorbed passivity. Marijuana however, has a special function, particularly in those whose use of it is consistent and/or regular. It gives a feeling of enhanced self-esteem; and, in those who are almost continuous users, it does not, in their view, seem to impair function. On the contrary, secondary to the change in self-esteem, its users seem to feel that they may even function better under its chronic or subacute influence. Marijuana does not necessarily disrupt social activities or those of work. Whatever the effort directed against its sale and use, this drug is readily and easily accessible. Marijuana is the vademecum of

the adult drug user and *cuts across all categories of preferential adult drug use*. It is considered to be as much commonplace in the user world as alcohol is in the non-user world and the use of the one usually precludes the use of the other.

Chicago is "blessed" with an increased availability of the particular marijuana variant hashish of "hash." The "stashers" in many locations and the cultivated crops of marijuana also enhance that local supply. Marijuana, as noted above, enhances whatever tendencies are already present in the individual and may, therefore, produce confident self-assurance, passive and plastic enhancement of perceptual sights or sounds, or paranoid anxiety and terrors. It is interesting also that for the chronic user, the effect of his particular batch tends to wear out in a couple of weeks, or he develops tolerance to it. Marijuana is the balm when other more exciting or more exhilarating substances are lacking. Surely whatever amount of this substance is seized must represent only a minute quantity of that which is available. An interesting and detailed discussion of the young marijuana user is provided by Winick.¹⁰

The Opiate Cycle

The use of opiates appears to be a problem primarily of the lower class Negro who represented 53.3% or 29,807 of a total of 55,899 as reported by the Federal Bureau of Narcotics in December, 1964. Of the remaining 25,642 (45.9%), Puerto Ricans represented (12.2%); Mexicans (15.6%); and all others (whites) (28.1%). Male users predominate over females by 5:1. There is a striking shift in the racial make-up in the narcotic user population above and below age 21. Below age 21, (47.6%) out of 2,029 opiate addicts were white; (22.4%) were Puerto Rican; (26.6%) were Negro and (3.3%) were Mexican. The shift in population from white to Negro predominance after 21 is curious and significant. As stated earlier, the younger Negro was reported to use alcohol more liberally. It would also appear that the post-21 year old white will tend to move

toward the use today of the psychedelic agents rather than the opiates.

This seems to be particularly true of the intellectually aggressive and rebellious young users of the college campus variety. For these people, there is a distinct fear of opiates and also a firm conviction that "mind expansion," through the use of variety of psychedelic agents, is not only desirable but actually liberating and therapeutic. It is the high school drop-out, often socio-economically deprived, who moves toward the use of opiates rather than the psychedelics.

Although heroin seems to be the drug of choice among many opiate users, others prefer morphine, Dilaudid, Demerol, Methadon, or Percodan. Only under situations of deprivation will they readily move from one to another. Some will use opiates intermittently, others only on week-ends ("joy-poppers") and still others, the core addicts will have to "score" (acquire) narcotics and "chip" (use them) daily.

The usual newspaper scare approaches and the lugubrious doomsday warnings of official and unofficial sources often suggest a problem of direct magnitude. What is not often appreciated is the idea that a considerable number of narcotic addicts are of the *controlled* variety.¹ How many addicts are able to maintain themselves in balance, i.e. in the valley between achieving effective euphoria and avoiding excessive tolerance is unknown. There is reason to believe that these non-criminal, circumscribed problem users among the addicted may be proportionately as prevalent as the non-criminal, circumscribed problem users of alcohol in the general population. This possibility must be understood in its fullest context. No doubt there are the decompensated addicts, but there may very well be a far greater population of relatively *compensated* addicts.

The addict always struggles with the *issue of maintaining euphoria, limiting tolerance and avoiding withdrawal*. In order to attempt to prevent the development of tolerance, some addicts will use the

narcotic in conjunction with or alternation with agents such as the amphetamines. Such combinations will tend to "normalize" the addict, so that he can function on a job. This may be especially true of the physician addict who continues to carry on a practice.

The narcotic addict is thus faced with this three-pronged problem, provided his supply of the drug is satisfactory and ample. The tendency for the "kick" or "high" to disappear over a period of steady use through the development of tolerance is one of the most disturbing elements of opiate use. The addict may come to feel that his stuff has been cut or is weak. One solution to this problem I learned from a physician methadon addict. He felt that methadon was "unreliable" as his tolerance developed and he revealed to me the trick of the addict to postpone his shot until he begins to enter withdrawal. At this point the rejuvenated effect of the drug is once again recovered. It may well be that for those addicts who cannot postpone the use of the drug until tolerance has remitted, *the voluntary hospital admission is merely another way of achieving the remission of tolerance*. The phenomenon of deliberately extending the time between "bangs," understood in its fullest context, makes the period of abstinence enforced by a "therapeutic respite,"¹ also a period during which the addict loses or reduces his tolerance. Little wonder then that the addict sprints gleefully to a supplier on his release. Withdrawal, in this sense, will only *reinforce the addictive process itself by facilitating the recovery of the most ecstatic highs*.

Wikler¹¹ and others seem to ignore the euphorogenic aspect "for this is also the addict's explanation." Dole and Nyswander¹² seem to prefer the idea that the addict merely wishes to "avoid withdrawal," although they have not provided a rationale for the claimed effectiveness of their use of methadon. If Dole and Nyswander have produced a valid result, they might well be achieving a *saturated or fixed tolerance* curve in those who have *lost the euphorogenic response* through pro-

tracted use, and therefore do most sincerely desire to avoid withdrawal.

The street addict knows the problem cited above. The primacy of euphoria, as asserted by the addict, is central to the elaboration of addiction. The addict seeks to limit tolerance and avoid abstinence, but he also urgently demands the recovery of his capacity for the "high." It is the tight-rope walk between these three positions that involves so much of the junkie's waking moments. In this context, a little withdrawal reduces tolerance and produces a better "high"; a complete withdrawal may eliminate tolerance. The so-called "cure," then, is a vital stage in the reinforcement of addiction, since cure is too frequently only a euphemism for the reduction of tolerance and the recovery of euphoric potential, also euphemistically called "relapse" for which the addict periodically strives. These words, "cure," "post-addiction" and "relapse" represent far more the hope of the self-deluding professional addiction fighter than anything related to the world or understanding of the confirmed addict.

Also in order to reduce tolerance and reawaken the "high," the addict may use various narcotics, or morphine and codeine containing cough medication; and, in desperation, he will also extract the morphine moiety of such agents as paregoric in order to "pop." One strange facet of certain addicts known as "needle fiends" may be their almost "hung up" tendency to repeatedly prick themselves for hours on end. These may also be the same ones who may try to milk the "rush" by drawing in and out on the needle. There is a compulsiveness in both of these activities which seems to transcend the mere narcotic aspects of the experience. It is true that such behavior tends to occur more commonly in those who would seem to have achieved a state of tolerance. It may also be that these individuals are attempting to reactivate the lost euphorogenic capacity of the narcotic by ritual and compulsive maneuvers intended to recover the capacity for euphoria, very much as an Indian in-

eants and dances to the dry heavens to invoke rain. Perhaps it is their notion that to feel anything is at least to feel, even if it is only pain.

Among the class of narcotics users to be found in the professions, several observations are pertinent. In the example of professionals whom I have observed, one psychopathological factor has been most impressive; there seemed to be an excessive and unbroken obligatory tie between the addict and his original family group, to the detriment of developing satisfactory or even love relationship with a spouse or offspring. The doctors in these cases seemed to be tied by incredible parent and sibling bonds, which hemmed them within mixed feelings of emancipatory hate and filial obligation. These were the good, reliable ones who would always "love their mothers" and "admire their fathers" despite data almost demanding the contrary. It was also among the doctors that covert addiction could be maintained in a functional but deteriorating balance for years before, and even without, detection. This despite amazingly open ruses to obtain and conceal drug use, procuring large quantities of the addictive agent through wholesale mailorder houses has for the physician been relatively easy. The other main medical source ruse is the prescribing of the addictive agent to many different patients, while really using it for themselves.

Opiate addiction, though often a group activity, is also a solitary activity, since the "high" is an unshareable experience. Contrary to methedrine or marijuana where the "high" may be socially or sexually shared, opiate "highs" are solo and asexual in effect. By contrast also is the psychedelic "trip," where there is a sense of oneness with the universe and a proclaimed ability to communicate wordlessly through some sort of extrasensory modality with others who are also on the "trip." This is said to persist for a while even after "coming down." Many addicts and others claim that there is little or no loss of mental ability and other acuties. My observations led to the conclusion that

there is a definite and progressive erosion of intellectual performance, capacity to reason and plan, and even an actual reduction of kinesthetic and touch discrimination senses, suggesting peripheral neuritis or neuropathy. These losses tend to be reversible on cessation of the drug.

I have postulated that the natural course of opiate addiction followed a pattern as follows:¹

1. Introduction—acceptance of available narcotic—usually an activity in which two or more people participate together.
2. Continuity—may be periodic, intermittent or continuous—usually two, often more, group activity.
3. Narrowing—reduction in number of friends, contacts, etc.—often a progressively isolated activity.
4. Isolation—narrowing has become maximum and a position of anomie is approximated which may be brief or protracted.
5. Realignment—reorganization of goals, relationships, and way of life—a re-entry into group experience.

Lindesmith¹⁴ agrees that opiate addiction does not begin as a result of an anomic state. The proposition seems true that addiction often begins innocently and as part of the social experience of the individual, whether he is already involved in crime or not. The idea of Cloward and Ohlin¹⁵ suggesting the addict is a "double failure" is therefore not tenable. Wilson¹⁶ quotes Narcotics Bureau Commissioner H. L. Giordano to the effect that preaddictive criminality approaches the 90% figure. Wilson adds that in Chicago the figures approach 45% for preaddictive criminality and 53% for postaddictive criminality.¹⁶

If anomie comes in at all, it is in phase of the progress of addiction when isolation has occurred. The progressive increase of tolerance, decrease of euphoric potential and initiation of dysphoria, as well as the growing anxiety about withdrawal, resulting from the chemical interaction with the drug seems to parallel the social schema projected above.

The relation of the "junkie" or core addict to his "connection" is a very special one. Both the "connection," or seller, and the police are often called by the same name, the "man." Surely this indicates an extremely ambivalent, if not openly hostile, attitude toward the supplier. Further, as the phase of "narrowing" develops, the difficulty in finding and maintaining contact with the seller to "score" becomes increasingly all encompassing.

Every waking moment is involved in travelling the addictive maze. A shot in the morning may last part of the day, and during the time of "coming down," the addict has to "boose" (steal), sell his item, or otherwise acquire money for the "score." The addict must spend considerable amounts of time waiting in relatively ill-designated locales, hoping to spot the seller. The seller will often only respond to the question "Where will I find you again" with remark "I'll be around" or "Here, sometime tomorrow," etc. The core addict is trapped in an attitude of hostile dependence toward the seller. This is particularly true in the phase of deepening alienation, narrowing, and isolation through which the continuous user moves.

Quite the contrary is the situation of the controlled or limited user. He may work and be in the more organized world in many ways. It is his participation in the more structured world which is vital to the preservation of his more restricted addiction. The physician and the successfully employed will, at least for a considerable period be able to avoid the core addict world. Perhaps there is a clue here to the avoidance of the degenerative development of the life. If the addict functions effectively in work and family, he will probably not get into serious difficulty until he begins to develop reduced euphoria, elevated tolerance, and/or withdrawal anxiety in significant proportions. As one addict put it, "Is it not possible that in many addicts the psychological disturbances develop after addiction or drug dependence occurs rather than before?"

It is integral to addict morality that he

not "rat" or "make a sale or purchase" from another addict at the insistence of the police. He must protect the group. If, however, he does, it is a part of the police action of the addict population to eliminate a known offender. For this purpose an overdose may be used. Addicts usually administer a "D.D." to themselves if they have abstained too long or do not know or check with a small dose first, the quality of a particular sample.

The Amphetamine Cycle

Amphetamines in the form of dexedrine and barbiturates, particularly Tuinal, are called respectively "uppers" and "downers" or in combination, they may be used as a "set-up," and are employed alone or between bouts of opiates. A combination of heroin, methedrine or amphetamine sulfate, and Tuinal, in the same needle, is used in New York and known as a "bombita." These agents are used to vary between states of intense elation and intense suppression, not depression. The purpose of the alternation is to achieve a controlled, manageable, and fluctuating hypersensitivity. It is as though to by-pass the development of a state comparable, but not related to that of tolerance or ineffective stimulation common to the use of opiates.

Among the amphetamines, one of the most dangerous is the use of methedrine, called "water." This is usually injected, and the amounts involved may exceed the usual lethal dose one tolerance has developed. A general agitation, restless limbs, and undecipherable stream of speech may be diagnostic.

It is not unusual for a protracted and regular "meth-head" or "water-head" to progress to a state of painful hyperaemia, and finally frank hallucinatory and delusional paranoia. Nonetheless, there is often the kind of awareness that the alcoholic hallucinotic may have. The voices and strange ideas, though audible, are understood by the amphetamine hallucinotic to be a product of the use of the drug and not projected into the mind from truly outside sources. This organic toxic paranoia

will progressively disappear if methedrine or amphetamine sulfate is completely avoided.

Codeine is at times used in combination with heroin by the hard core addict. It is said to be non-addictive but this may have less to do with its limited use than the fact that the "come down" from codeine is very uncomfortable.

The Psychedelic Cycle

LSD-25 is a drug which is banned to general medical use, but is readily available in the form of "sugar cubes" and capsules, mostly of a home-made variety to the user. Just as two years ago the "meth-head" emerged full-blown onto the drug-use scene; this season and last the fashion seems to be "acid," peyote, DMT (dimethyl tryptamine), DET (diethyl tryptamine), DPT (diphenyl tryptamine), psilocybin, hashish (or "hash"). Romular (dextromethorphan hydrobromide), a cough medication, if taken in sufficient amount, has been said to produce a psychedelic effect. Occasionally morning glory or sunflower seeds, readily available, are used as psychedelics.

Opiate addiction is the modality of the intellectually less imaginative, the economically deprived, the Negro and the Puerto Rican. The psychedelic is the agent of the middle and upper incomes, the artistic and jazz worlds, and more particularly the "avant-garde" and cause-espousing college student. It is the campus which seems to have suffered a sudden influx of psychedelic users. Most of these had been or are currently also marijuana users and the step to "acid" is a short one. This is surely the new epidemic. Some of the parameters of hallucinogenic drug abuse have been presented as encountered at Lexington¹, where the population may be of a somewhat different nature than we have encountered in the Chicago community. For one thing, peyote, mescaline, and psilocybin, as well as the great majority of the Mexican and South American fungi are not very frequently encountered. Until February 1966 it was not illegal to ship peyote buttons.

The use of psychedelics for the self-styled purpose of "getting to know one's self" or for just "taking a trip" have become commonplace. In the parlance of the "acid-head" there is the myth and/or experience of the "good trip" and the "bad trip." It is important that the subject be very well prepared for the trip since this will influence the kind of experience that he has. For the first trip a lesser than usual dose is administered to test the result and introduce the subject gradually to the experience. It is also usual and necessary that the subject have a "guide" or experienced friend along on the first and even subsequent trips. The "bad trip" occurs in the fearful, or more seriously unstable as a rule, but may occur in the supposedly stable as well. In fact, there is a tendency on the part of most users to have at least one or more "bad trips," or even progressively worse trips.

It is interesting to compare the LSD experience to another earlier mind alterer. "Sir Humphrey Davy, discoverer of nitrous oxide, had euphoric dreams when under the influence of the gas. His emotions were "enthusiastic and sublime"; he made "great discoveries"; ideas were organized with consummate ease. But when he tried to recall his ideas they were "feeble and indistinct." Finally he was able to recall one of his great ideas and inscribe it in a sentence: "Nothing exists but thoughts!" Thus do sublime visions collapse into nonsense sentences. Perhaps those who experiment with hallucinogenic drugs are tormented by the most cruel of illusions, that of vast accomplishment without effort."¹⁸

There is a tendency for each circle—the opiate, amphetamine-barbiturate, marijuana, and psychedelic—to keep within its own confines. The highest cross-over is between the marijuana and the psychedelic users. Although there are individual exceptions, the nodal configurations tend to remain fairly constant. There are highly gregarious groups within the marijuana-psychedelic circle, and as evidence of their intellectual accomplishments and mystical

leanings, they tend to have literary gods and cultural guides. The *Tibetan Book of the Dead* is for information on what to expect on "acid trips." Zen Buddhism, for religious uplifting is pursued in various adulterated forms, particularly via Suzuki and Alan Watts. The *I. Ching*, an ancient Chinese book purporting to concern itself with "the chance aspect of events," according to Karl Jung, is used for casting lots about the future, the present, and any other situation requiring mystical examination. All of the works of Hermann Hesse are required reading, as well as Rilke. Huxley's *Doors of Perception*, Burroughs and Ginsberg and others are in group fare.

There are subtle differences in smoothness, duration, speed, anxiety- or stomach-provoking among the various psychedelic agents, most of which, as noted before are made by industrious amateur "midnight" chemists in kitchens. Such synthesis may be very dangerous to the manufacturers, who are usually in a semistupor from the very process of manufacture. The inventive amateurs themselves are constantly changing chemicals and producing new ones.

One of the most confusing aspects of psychedelic use has been the claim of therapeutic usefulness. Launer¹⁹ gives an excellent review of the present state of these affairs. He describes two types, a psycholytic and a psychedelic therapy. The first is aimed at assisting an in-depth psychological approach; the second in employing the cosmic-mystic experiences therapeutically. From observing the products of the self-styled helpers I have encountered among the hippies, I have very profound questions concerning these agents and remain skeptical about their therapeutic potential.

The Iatrogenic Abusers

Very few papers have appeared to present this danger. One of the best to outline the innocuous drugs which fall into this category is by Kelman²⁰; one of the strangest and least informed is by Zinburg and Lewis.²¹ Among the problem-drugs noted by Kelman and confirmed by my own ob-

servation are meprobamate, Librium, Preludin, Tenuate, Darvon, Placidyl and Chloral hydrate. My own experiences would minimize the dangers of Librium and chloral hydrate. One must also differentiate between *mere overuse* and *ritualistic compulsive abuse*. Tenuate and Preludin, as well as Dexedrine and Dexoxyn will fall into the first category of overuse, meprobamate, Doriden and Placidyl (especially when used during the day) or combinations, particularly with amphetamines, may produce serious compulsive problems. A tendency toward the development of tolerance with the latter group will result in progressively greater overuse and the patient will experience a mild "high" and a continuous vague state of confusion, giddiness, psychomotor awkwardness, and sensory irritability. Darvon falls in a special category because it seems to produce no overt symptoms except for an inability to organize and follow through complex behavior or mental activity; it does not interfere with simpler intellectual functions, and manifests itself in a constant craving and developing tolerance.

Several other drugs are also hazardous in selected individuals.

The Drugs and the Law

A blanket condemnation and indiscriminating assault has been mounted against all of the drugs currently considered addictive or dangerous. Many feel that all of the categories of drugs mentioned above should not be lumped carelessly together.

Much argument has been raised concerning the pros and cons of narcotic, dangerous, and abused drug use. Schur²² has provided an excellent study of the "British System." Ausubel²³ has stated that "compulsory, closed-ward treatment emphasizing adequate vocational training and follow-up services and implemented through the same civil commitment procedures used for the mentally ill, is the only feasible method of medically treating narcotic addicts." Kuh²⁴ has proposed a legal mechanism. As to the difficulty, if not impossibility, of disrupting the pattern of

opiate addiction outside of a closed ward setting for the hard-core addict I would agree with Ausubel. As to the possibility of assuring ourselves that such disruption would remain after hospitalization, I cannot be so optimistic, as Ausubel. I am also not convinced by the arguments of Lindesmith²¹ who feels that "the addict appears to use drugs primarily to avoid the unpleasant reaction which occurs when he stops." This position fails to consider the multifaceted nature of the problem. I do not know what to do with the hard-core addict, although I believe many approaches should be explored.

There is a dropout in addictive ranks^{1, 2} for no discernible reason and not all addicts are regular. Among their reasons for the dropout is the development of the *tendency for a fixity of tolerance*. In time many opiate addicts may lose the euphoric capacity altogether, which in earlier periods of enforced or voluntary abstinence tended to produce a rejuvenated euphoria. Not only does the possible development of an unremitting tolerance occur, but also the use of further opiates may actually tend to produce distaste, if not actual discomfort or pain. The evalua-

tion of fixed tolerance and dysphoria, instead of euphoria, may have the most far-reaching implications in the treatment of addiction.

Whether or not the problem with users of drugs other than the opiates should be considered in the same legal way is open to doubt. Dangerous as they are the effects, though in the same direction, are less serious.

As to the famed British system, the latest Brain report on addiction²⁶ shows a growing concern about the increase in addiction through the indiscriminate administration of opiates and makes recommendations tending to tighten the whole approach. If we are to admiringly look to the British system, which Larimore and Brill²⁷ have denied is a system so much different from ours, we must have serious second thoughts.

I don't know what the solution to the narcotics and abused drug problem is. It is not one problem, but many; it will require not one solution, but a number. But most of all, it will require a much closer clinical scrutiny, a professional openness to any and all suggestions made in honesty and good faith.

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The addict and treatment

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ACTION BY THE AMERICAN MEDICAL ASSOCIATION in June, 1963 (see JAMA, September 21, 1963) established that physicians have a fundamental legal and ethical responsibility to treat narcotic addiction. Addiction to narcotic drugs is a medical syndrome based on an underlying emotional disorder. Adequate medical care, treatment and rehabilitation of the persons addicted to a narcotic drug are essential factors in meeting the problem of addiction in the United States.

The physician who treats a person addicted to a narcotic drug (opiate) is faced with a complex and multiphasic problem. The addict is suffering from a serious emotional illness, manifesting his disturbance in great part through his craving for, and relationship to, the drug. Various characteristic behavior patterns compound the clinical problem. Drug addiction represents the sole adjustive mechanism to living problems the addict has available; he has found something to relieve him of unbearable tensions and anxieties. When he realizes that the physician is going to take this substance away from him, even a strong wish to be rid of the drug becomes complicated by the fear of ability to perform without it.

The addicted person also knows that he is faced with certain distressful and pain-

ful psycho-physiological reactions owing to deprivation of the pharmacologic effects of the drug. He remains suspicious and apprehensive in spite of reassurances by the physician that he can be withdrawn with comparative ease and comfort. Under these circumstances, the addict is one of the most frightened persons the physician will be called upon to treat.

The relationship of the physician to his addicted patient is usually difficult. Too often the physician has a conscious or unconscious feeling of repugnance and condemnation toward the person who has "permitted himself" to become a "junkie," a "hop-head," a "dope fiend." The treatment period is also frequently characterized by continuous urgent and almost insatiable demands by the addicts upon the physician for the relief of tension in the form of medication, attention and privileges. Complete disregard of the individuality of the medical personnel and a seemingly total lack of appreciation of their efforts are common. The behavior by the addict frequently results in an exhausting, unrewarding, and, at times, repulsive experience for the nursing and attendant personnel upon whom the physician de-

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pends for many aspects of the treatment.

It is essential, though, that the drug-addicted person be shown the same kindness and compassion as would be shown any person suffering from illness, physical or mental. An addict ought not be automatically branded as a criminal and a social outcast, despite his socially unacceptable behavior. Physicians should not forget the factors of character structure and environment which have contributed to the development of the clinical problem of addiction.

But when we speak of "treatment" to what are we actually referring? Do we mean merely physical separation from the drug, abstinence, where withdrawal constitutes "treatment"? Are we to be behavior-oriented or person-oriented? Are we speaking of "treatment" of addiction on the basis of implementing a community-wide control program aimed and geared to meet with the widely variegated problems of the total addict population of any metropolitan area or state? Are we speaking of the "treatment" of a particular drug dependent person or a specially screened and selected group of patients? If so, which ones? Who is the person(s) we are being called upon to treat and for what particular physical, psychological and sociological ills are we going to treat him? What factors exist which determine the specific courses of therapeutic action?

No single professional person, group, agency or organization can adequately handle the many different problems relating to even a single case of addiction. To then ask this single profession or group to meet with the community problem of addiction is totally unrealistic and futile. It is the responsibility of the fields of medicine, psychology, law, sociology, social work and ancillary governmental and voluntary groups to meet and to work with any individual beset with this problem. It remains, though, the ultimate responsibility of each citizen of any community where such problems exist to demand the provision and financing of adequate facilities.

The mere use of a drug and/or violation

of any of the drug laws cannot be equated with addiction even if the use is periodic or intermittent. In each individual case a specific medical diagnosis is always required.

Addiction, or "drug dependence" if we concur with the World Health Organization, is a medical syndrome, a chronic, relapsing symptom complex invariably reflecting some form of underlying mental disorder. The addicted person is suffering from a serious mental or emotional disturbance and manifests this disturbance in great part through his craving for and his relationship to the drug substance. Subject to the specific pharmacological characteristics of the particular drug will be innumerable secondarily elaborated physical, physiological, psychological and social complications and consequences.

The meaning of taking narcotics (or alcohol, barbiturates, stimulants, etc.) will vary from patient to patient and the drug may even serve different functions at different times for the same person. Drug dependence will be seen to operate in dealing with anxiety, guilt, aggression, inadequacy, depression, sexual urges, perversions, physical pain, psychoses, neuroses and character disorders. A great variety of psychopathological reactions are inextricably interwoven with the addiction process. Practically every entity in the psychiatric diagnostic nomenclature will be seen.

It would appear that the symptom of drug dependence always represents a mode of adaptation, perhaps the sole adaptive mechanism to living problems the person has available at the moment. It is a symptom representation, a behavioristic reflection of some form of psychological stress-functioning, an attempt to meet, deal with or master some form of intrapsychic imbalance, conflict or excitation. It is a kind of last-grasping toward something so as to forestall the horror of inevitable disintegration of self, of psychic disorganization that spells the doom of total helplessness.

The addicted person has found some-

thing that he knows will give him relief from unbearable tensions and anxieties. Even a strong wish to be rid of the drug substance is complicated by an even stronger fear of his real ability to function without it. To suddenly deprive him of this mechanism without replacing it with something at least almost as effective is inflicting harm in the name of help. It is a refined form of cruelty.

Pervading the clinical picture in most, if not all, cases of drug dependence is an insidious, inexorable helplessness of the addicted person to deal with his addiction by himself. Through every stage of the development of the addiction the person we are dealing with is helpless to make an adequate adjustment by himself. His personality is characterized by serious defects in its development and pathological tendencies inherent in its structure. He is intolerant of anxiety. He avoids or escapes experiencing it through impulsive action. Before discovering the effects of drugs, his sense of security and well-being are dependent upon the immediate gratification of his needs and wants. The ordinary delays and inconveniences of daily living are experienced by him as intolerable frustrations, as crises. If through some kind of action he cannot escape them, unbearable tensions are experienced which he feels the environment should relieve. When the relief is not forthcoming, he feels that his inalienable right to happiness as a human being has been abrogated. Thus, simultaneously confronted with the irresistible need for immediate gratification and an ungratifying environment, it is inevitable that he will feel justified in employing any measure to rectify his deprivation.

The etiology of the addictive process resides within the psychological structure and functioning of the individual rather than in the pharmacological effect of the drug. Even if this person did not turn to the use of drugs to relieve his tension, he would need help anyway.

Once introduced to the drug, however, such a person will never forget its effects. The initial use of the drug produces for

him an incomparable sense of well-being, self-sufficiency and security. Problems no longer exist; decisions do not have to be made. The drug is the decision. The memory of this experience beckons as a panacea for all the unbearable frustrations of daily living. Once the alluring invitation is accepted, addiction is almost inevitable.

As in practically all instances of clinical pathology, addiction, drug dependence, is not merely an "either-or" condition. A person is not just "either addicted or not addicted." Drug dependence is a phenomenon that courses through a graduated continuum of degree of involvement or intensity of dependency from extremely mild to extremely severe.

There are also different types of addicted persons. Variable factors coexist in various combinations as degree of craving, particular psychological pathology, physiological dependence, and what Dr. Chein has termed "degree of total personal involvement." Each type will pose different therapeutic problems and are quite likely to have different etiological histories and prognoses.

Variations also exist from patient to patient as regards level of motivation to live without the addicting substance, to be rid of it. Still further variations exist in the ability of the patient, the degree and type of ego-organization and level of ego-functioning, to work toward such an aim, to be able to relate to the treatment staff, to be able even to accept any help that might be made available to him. Again, these variations run the gamut of possible degree.

Obviously, it is meaningless simply to identify an individual as an "addict" or to speak in terms of a "typical addict." It is completely erroneous to believe that these patients constitute any type of a really homogeneous group. Likewise, it is meaningless to think in terms of "the treatment" in cases of drug dependence.

A general principle of operation, though, can be stated in the treatment of drug-dependent persons. Each addicted individual is entitled to respectful acknowl-

edgment of his individual status as a human being and should be availed of complete medical, psychological and sociological assessment and evaluation. He should also be provided the best available treatment in terms of his particular psychological, medical and sociological needs.

In most instances, it would seem that reliance upon rehabilitative and control efforts on a voluntary basis is ineffectual, if not wholly futile. Strict and enforced supervision is usually required. But exceptions do exist.

In both private and clinic practice, I have treated narcotic, alcoholic and barbiturate dependent persons who sought psychiatric care because they perceived their own emotional illness and recognized that their addiction must somehow be related to it. Their motivation, sincerity and cooperation were good and the therapeutic results were excellent. In some instances, the patient actually withdrew himself through self-controlled administration of a gradually decreasing dosage of his own supply of the drug. Some cases required no specific withdrawal program because of the low level of physiological dependence. Other cases were withdrawn on an ambulatory, out-patient basis. In still others, hospitalization was required and the withdrawal was accomplished on the open medical ward of a general hospital. I must stress, however, that these addicted patients are far in the minority but not the inconsequential rarity as is so often posed.

The vastness of the problem in our major metropolitan areas dictates the development of community control programs. Secondary extension of such programs through adequate training facilities can reach out into private areas of medical practice to meet with drug dependent patients who can avail themselves of private care. The greatest majority of these patients, however, cannot.

Such programs, in order to meet with the multiplicity of causes and compounding complications, must be a multifaceted operation. It will require inpatient facilities, an outpatient clinic and community and

neighborhood social case-work services. All facets should be under a single, central administration with the same professional and ancillary personnel retaining continuing contact with the patient through all phases of program operation. Innumerable community resources, medical and social, must be recruited into a community project.

The hospital itself, in dealing with most patients, must be a specialized treatment facility insuring an environment free from contraband drugs. Its staff must be specially trained to meet with the many problems of acute withdrawal, physiological and physical care and treatment, and psychological and social reorientation.

The basic goal of hospitalization is to *initiate* the restoration and facilitate the maintenance of physical and mental health. The patient must be returned to the community in as short a time as is possible, usually feasible within 4-6 weeks. Its role in the total treatment program is:

- (1) Provide withdrawal and other medical care indicated.
- (2) Secure psychiatric, psychological and sociological studies to gain an understanding of the functioning personality of each patient.
- (3) In terms of this understanding, develop a patient-specific post-hospital treatment and rehabilitation program in concert with the requirements of the individual patient. All preliminary steps of implementation of his program must be accomplished prior to his discharge from the hospital.
- (4) Opportunity for immediate readmission must be available.

That phase of total treatment which deals with withdrawal from the drug generally requires specialized facilities, a strictly controlled and supervised hospital setting where the absence of contraband drugs can be assured. Some addicted patients can be treated on the medical service of a general hospital. Most patients, however, do not have the continuing motivation and perseverance to endure in such a permissive and uncontrolled setting and will

leave prematurely or will seek additional sources of narcotic drugs. Many private hospitals specialize in treatment of drug addiction. Psychiatric divisions of general hospitals also frequently function very effectively. Advice concerning these institutions can be obtained from local medical societies, the American Hospital Association, the American Psychiatric Association, and the American Medical Association. In some areas the patient may be admitted to a local or state public institution where treatment programs exist. Local or state health departments can be of aid in obtaining information about these institutions. Where local or state facilities are not available, the patient can be referred to the U.S. Public Health Service Hospital at Lexington, Ky. The USPHS Hospital at Fort Worth, Texas is for male patients residing west of the Mississippi.

After the diagnosis of addiction is established, the patient is awaiting admission to a specialized facility, and his acceptance and date of his admission are confirmed by the attending physician, oral doses of Methadone hydrochloride (Dolophine) may be administered on an outpatient basis. This should be accomplished by daily visits to the physician and for not more than ten days to two weeks. Needed dosage will be established by observation of response to medication. No more than one day's supply of medication should be dispensed to the addict at one time. It may even be possible to place the patient in a general hospital where narcotics can be administered under direct supervision while final arrangements are being made for admission to the specialized facility.

The question is frequently asked if hospitalization is always required to withdraw an addicted patient from his drug. The combined statement of the American Medical Association-National Research Council indicates "Withdrawal on an ambulatory basis is *generally* medically unsound and not recommended on the basis of present knowledge." Exceptions do exist. Cases can be cited where careful evaluation of psychodynamic forces, history and course

of the addictive phenomenon, type of drug used, and many other personality and environmental factors led to successful, wholly ambulatory treatment. This exceptional treatment should be attempted *only* by physicians with special training, skill and experience in the evaluation and management of addicted persons. The AMA-NRC statement recommends that in such cases consultation be effected with a psychiatrist, if available, or with another physician experienced in this field who will substantiate the fact that ambulatory treatment is indicated. Obviously, adequate records should be maintained of visits and medications administered. Oral Methadone hydrochloride (Dolophine) is the drug of choice. The patient should not receive any more medication at each visit than will provide for his needs for one day—an amount no more than that required to maintain withdrawal symptoms at a minimum. Such treatment should be terminated immediately if additional supplies of medication are being procured or if the prearranged schedule of withdrawal is not being followed. Withdrawal can usually be completed within three weeks. If there is concomitant physical illness, hospitalization is almost always indicated.

The particular program of withdrawal and the speed with which it is accomplished depend upon the physical condition of the patient and the extent to which he is physically (physiologically) dependent on the drug. Physiological dependence can be evaluated only by clinical observation of the development of withdrawal symptoms. It is seldom possible to gain an accurate report from the patient of his actual drug intake. Either he overstates his intake to obtain more medication or he does not know the drug content of the material he has been taking.

The addicting drug is completely discontinued at the onset of the treatment. An intensive state of physical dependence can be judged within 6-12 hours after his last "shot." Withdrawal symptoms intensify rapidly. It is never necessary, however, for the patient to suffer any severe

distress or pain of a fully developed syndrome. If serious organic disease exists, the patient should not be subjected to the strain of rapid withdrawal and the organic disease should be treated before the addiction. A maintenance dose of morphine or Methadone will prevent the development of withdrawal symptoms until actual withdrawal is feasible. Oral administration usually suffices.

In mild cases of opiate addiction, successful and comfortable withdrawal can be effected through simple nursing care and attention to nutrition and fluid intake. The tranquilizing drugs chlorpromazine (Thorazine) hydrochloride, perphenazine (Trilafon), or promazine (Sparine) hydrochloride help to allay the ever-present anxiety of the patient. Mild bedtime sedation is helpful.

Moderate to severe degrees of physical dependence will require substitutive therapy; oral Methadone is the most effective. Methadone can be substituted for any of the opiate drugs, natural or synthetic, including heroin. It will prevent the development of any of the abstinence symptoms. The patient can then be withdrawn from methadone rather quickly and simply. Usually 1 mg of methadone can be substituted for 4 mg of morphine, 2 mg of heroin, 1 mg of dihydromorphinone (Dilaudid) hydrochloride, or 20-30 mg of meperidine (Demerol) hydrochloride or codeine. It is seldom possible, though, to judge intake this closely, and the initial dose of methadone should be that amount required to control the symptoms of abstinence. In rare instances, parenteral administration may be required. The initial oral dose is usually 10-30 mg four times daily. The rate at which methadone is decreased must be determined in each patient. In the more severe cases, methadone should be continued at this level for two days, establishing that dosage which just prevents the development of withdrawal symptoms. The dose of Methadone can then be decreased at daily or two-day intervals, always maintaining a level of intake required to keep withdrawal symp-

toms minimal to absent. Added flexibility of scheduling can be attained by also manipulating the duration of time between doses. Even the most severe cases, unless complications exist, can be fully withdrawn in seven to ten days. It becomes a matter of clinical judgment.

The use of tranquilizers, perphenazine 4-8 mg or chlorpromazine 25-100 mg four times daily, is also of considerable aid in meeting the patient's anxiety and minimizing his "yen" or craving for the addicting drug. No special diet is required unless specific organic disease exists or withdrawal has already developed prior to the initiation of treatment. In the latter situation, nausea, vomiting, cramps and diarrhea may have progressed to a state requiring special consideration of diet and administration of antispasmodics. The patient is frequently dehydrated, and special attention must be paid to electrolyte and fluid balance.

Of equal importance to any medicative routine is the constant kindly and reassuring presence of medical and nursing staffs. It is also inadvisable to permit visits by friends during this phase of treatment, since the patient may be depressed and his craving for the addicting drug still exists; "well-meaning" friends have been known to smuggle drugs to patients undergoing treatment. Hospitalization should continue until emotional and physiological stability have been attained. This will usually require a period of 4-6 weeks.

Most usually, once the addicting substance has been successfully withdrawn, in a day to a week, the patient is frequently overwhelmed by a surging sense of confidence and optimism. In the protected environment of the hospital, with minimal instinctual tensions, absence of social pressures and free of the physiological dependence upon the drug, the memories of the pain and anguish precipitated by the frustrations of daily living become too dim and hazy to have real significance or to be the basis for the lesson that experience should have taught. Now sincere in the belief that he is able to take care of him-

self and tolerate ordinary frustrations like other people, he presses for release from the hospital. Usually neither logic nor reason can persuade him to remain in the hospital long enough to prepare himself for the inevitable trauma of emergence into the outside. It is just such an instance, which represents the preponderance of addicted patients, where the instrument of civil commitment may be of value to the patient.

A great deal of controversy exists in relation to the role of civil commitment in dealing with problems of drug dependency. The experience of many would seem to indicate that it has a vital role to play in a large number, perhaps the majority, of cases. But this does not mean that the patient is to be sentenced to a State Hospital for being mentally ill in lieu, perhaps, of going to jail. It need not mean State Hospital at all. As a matter of fact, it is my belief that a purely institutional setting, hospitalization on either a court committed or wholly voluntary basis, by itself, especially for a prolonged period of time, promises little in the direction of success.

Hospitalization must be viewed as but one facet of a total treatment program. It has a very specific role to play but by no means constitutes *the* treatment of any problem of drug dependency. The instrument of civil commitment is viewed as just that, an instrument. It is another tool available to the treatment and rehabilitation staff in its effort to help the addicted patient to help himself. It is a tool to be used where indicated and to be applied throughout all phases of rehabilitation—hospital, outpatient and community follow-up social case-work. It need not prolong the period of hospitalization beyond that dictated by the immediate clinical requirement of any given case at any moment in the course of his illness.

A great deal of controversy also exists regarding the role of "maintenance" in the treatment of narcotic drug addiction. Physicians who have treated drug dependent persons know that there are spe-

cific medical indications which dictate the administration of narcotic drugs during the treatment of specific patients. Drugs may be required while awaiting admission to a treatment facility, during the post-admission but pre-withdrawal period and during the withdrawal period proper. These techniques, of course, will always be under strict medical supervision and control and will be medically indicated in a majority of treatment cases.

There are a few cases of a very particular psychodynamic and psychopathologic picture where narcotics may be provided over a relatively extended period of time *as a form of expectant treatment*. These are highly selected patients, an extremely small percentage of the addict population. But they do exist.

An even more rare instance may also be cited. These are the cases where the continued daily administration of a constant and controlled amount of narcotic drug is the treatment of choice and provides the only means for the patient to live a normal and productive life.

Indiscriminate provision of narcotics for an indefinite period under any circumstances is cited as "treatment" only by those individuals who have no knowledge of the addictive process or of the drug dependent person.

It is totally unrealistic to believe that the role of the physician in the treatment of the addict terminates when withdrawal from the drug has been completed. In many respects, it is just the beginning. It is true that rehabilitation began at the first moment of patient-physician contact. The most important efforts, however, begin when the patient is ready to leave the hospital and re-enter the community. Continuing contact and help are essential to the patient on his reintroduction into society. If such help is not forthcoming, relapse to the use of drugs is almost inevitable. Addiction is a chronic, relapsing disease and any relapse cannot be viewed as a "therapeutic failure." Periodic abstinence, even if only for a few weeks or months at a time, constitutes real prog-

ress. In practically all cases, though, the physician will require community help in his treatment of his addict patient.

Outpatient care, whether accomplished in a community program clinic or the office of the private physician, must include psychotherapeutic services and social case-work with the patient and, in almost every case, with the patient's spouse and family. Psychotherapy must be available in whatever form and on whatever level is determined to be required and applicable to the individual patient.

In most instances, these patients are very poorly motivated for treatment, psychotherapy or general medical care. They are quite denial-prone in relation to the existence of any type of emotional disorders and quite insistent that there is no need for any form of psychiatric help. Motivating them for treatment is extremely difficult at best and requires great patience. Citing the evidence in the patient's history, experience and behavior and seeking to instill fear with a direful prognostic picture usually does not work. These people have all the answers and are able to rationalize all experiences with great keenness. By using such technique, we also run the risk of arousing high levels of overt anxiety in our early contact and cause the patient to flee from us back into the protection of the drug.

Winning the trust and confidence of the patient constitutes the first major task to be accomplished. The understanding, nonjudgmental, nonmoralizing acceptance of the patient as a sick person is essential for any of the treatment personnel. The physician and any ancillary aid he will require must demonstrate an active interest in the patient, indicate his siding with the patient in his struggles. No progress can be expected until the patient has become convinced of this. *Actually, we are trying to establish a kind of relationship with this person that he probably never before in his life experienced.* The physician and all personnel coming into contact with the patient must identify and acknowledge positive aspects of the pa-

tient's personality and behavior so that we are not just another criticizing authority to him. These patients have been lectured to and scolded for years by parents, spouses, friends, employers, probation officers; they are hypersensitive to criticism, which has come to signify rejection. Careful choice of language is essential in establishing communication and avoiding implying condescension and hostility.

Throughout all our contact with these patients we must be constantly alert to our own emotional responses to the manipulations, resentments, extreme demandingness and all the various manifestations of an infantile dependency posed by them. Direct advice and even active intervention will be indicated in dealing with many reality living problems. Time and appointments mean little; regulations and administration of medications will often be used as aggressive weapons against the therapist; demands for extra attention, medications and special considerations are to be expected. Comparable requirements will be exerted by the patients' families also. And throughout it all we must be consistent, steady, honest, noncorruptible, always keeping our word in whatever we might promise the patient. Our level of tolerance for all forms of behavior must remain high even when we can see that it is being utilized as a testing device in their feeling us out. This is most true when the patient utilizes his drug use as a direct challenge to our attempts to help him. Patterns of self-destructiveness in overt and covert methods must be recognized and dealt with.

It is too often found that the physician, or community agency, rejects or will not accept the drug dependent person as a patient on the basis that he is too busy to bother with someone who does not want to help himself and, anyway, he has more important things to do with his time. What we usually mean is that I can find much more rewarding and gratifying patients with whom to work. I grant that this is true but it does not release us from our medical responsibilities.

In each case aid must be enlisted from paramedical personnel and ancillary groups in effectuating the social rehabilitation that is always required. But social rehabilitation must be a community, even a neighborhood centered function. This activity cannot be served in the hospital or offices of an outpatient clinic or a private practitioner. On-the-spot, neighborhood contact is deemed to be essential. Many different community social and welfare agencies, governmental and voluntary, will have to be utilized to meet the many ramifications of living problems. The social service staff, in the case of each patient, will make specific contact with whatever social agency or group seems to be indicated in implementing the specific social case-work programming which had been determined for the particular patient.

Continuing liaison of the social worker assigned to the particular case with all activity related to the patient is necessary. The staff and activities of any agency used must be integrated into the total planning in the treatment program determined for each patient. Of basic consideration is that the same treatment personnel, working from a focus of central administration, must retain continuing contact with the patient throughout all aspects and phases of his treatment and rehabilitation program. If these requirements are not met, relapse to drug abuse is almost inevitable.

Members of organizations such as Alcoholics Anonymous, Big Brothers, Addicts Anonymous, in a 1:1 ratio with the drug dependent patient, can serve very effectively in assistance to the social service staff. The clergy, religious groups, various businessmen's, fraternal and citizen's groups also have important roles to play. And let us not forget the public health nurses, parole and probation officers.

To be emphasized again is the importance

of all such planning being accomplished prior to discharge from the hospital and a kind of "reaching-out" social case-work technique developed in order to maintain contact between program personnel and the patient and his family. It is in this instance also that civil commitment process can perhaps be effective.

These combined efforts must work with the patient in living areas of employment and job-placement, financial support, family care, vocational counseling and job training, academic education, marital and family guidance, recreational and social interests, minority group relationships and acceptance of community obligations and responsibilities.

Conclusion

I believe that the drug dependent person can be helped but only with an enormous expenditure of energy by the community resources of all professional and social groups. That punitive community, as experienced by the addicted person, that depriving environment which had made the addiction necessary, must now assume the role of the benevolent but firm communal parent. The community must become cognizant of the severe emotional sickness and the helplessness of the drug dependent person. The community must recognize his total inability to provide help for himself with his problem of addiction and his incapacity to cope with the myriad of unpleasant realities of routine living even with the drug. The community dare no longer disregard its responsibility toward the care of its own problem of addiction, and, perhaps, its own responsibility in the creation of this problem. It is a financial burden, a costly one. But so is its cost in terms of self-degradation, family disintegration and social disorganization.



Why compulsory closed-ward treatment of narcotic addicts?

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THERE ARE MANY INTERRELATED and highly controversial issues concerned with the management of the drug addiction problem, namely, legalization, ambulatory treatment, voluntary treatment, and the so-called "British system." The advocates of the latter proposals have made surprising headway in recent years in converting to their point of view such important professional groups as the New York Academy of Medicine¹ and the Joint Committee on Narcotic Drugs of the American Bar Association and the American Medical Association.² I will not have time to consider all of these issues in detail, and will, therefore, confine my remarks to a general critique of the philosophy of permissiveness in the treatment of drug addiction, paying special attention to the need for compulsory, closed-ward treatment.

The general strategy of the permissivists is to represent all opponents of their outlook as favoring a punitive approach to the treatment and prevention of narcotic addiction. Thus, anyone who favors treating addicts as patients rather than as criminals, but who is opposed at the same time to legalization of addiction, or who believes that addicts can be treated most effectively in closed wards on a mandatory basis, is branded by the permissivists as punitive, authoritarian, and reactionary.

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Criminality

Including most representatives of most law-enforcement agencies, practically everyone concerned with the problem believes that drug addiction, like alcoholism, is a disease requiring treatment rather than a crime requiring punishment. Among psychiatrists, psychologists, sociologists, and even many jurists, the criminality of drug addiction is no longer a serious issue—despite the efforts of permissive extremists to portray everyone opposed to ambulatory treatment and legalization as believing that drug addicts are immoral and vicious criminals. Technically speaking, of course, drug addiction *per se* is not a crime. But since all drug addicts are guilty of unlawful possession, illicit sale or purchase of drugs, or illegal diversion of legitimate stocks for personal use, drug addiction for all practical purposes is a criminal offense.³

The present legal status of drug addiction as a crime in effect (if not according to the letter of the law) is an unfortunate social anachronism. When the first federal hospital for the treatment of drug addiction was established in 1935, the U. S. Public Health Service regretfully went along with the proposal to retain the criminal status of acts associated with the practice, in the mistaken belief that only in this way could compulsory treatment, a drug-free therapeutic environment, and adequate supervision of the released addict be insured. Actually, all three aspects of

treatment could be satisfactorily accomplished without making drug addiction a crime, by requiring mandatory hospital commitment of all addicts, including those who voluntarily commit themselves.⁴

Many unfortunate consequences have resulted from this legal anachronism. The federal drug addiction hospital has acquired an unmistakable prison atmosphere, which not only subtly influences the attitudes of physicians and attendants toward patients, but also focuses undue attention on the security and custodial aspects of treatment. Little hope for attitudinal improvement can be anticipated when society adopts a punitive approach toward victims of a behavior disorder and treats them as criminals. The social stigma attached to ex-convicts also impedes the rehabilitation of treated drug addicts when they return to the community, and discourages parents from seeking the help of courts and social agencies for their addicted adolescent children.⁵

To regard drug addiction as a personality disorder rather than as a crime or moral infraction does not mean, however, that society must refrain from making any evaluative judgments regarding the practice, or permit individuals to acquire and continue the practice if they so desire. The mere fact that a drug is used habitually is not necessarily a bad thing. But when the habitual use of certain drugs happens to be detrimental to the well-being of both the individual and society, it must be regarded as a pernicious vice. Opiate addiction, in the overwhelming majority of cases, interferes with the productivity of work, with the desire for real achievement, and with mature, responsible adjustment to problems of vocational, family, social, and hetero-sexual adjustment. Historical experience in China, Egypt, and other Eastern countries has also shown that drug addiction is a major contributory factor in perpetuating poverty, famine, disease, ignorance and lack of social and economic progress. Hence, society has a moral right and duty to suppress drug addiction, both to protect itself and to prevent the individ-

ual from inflicting harm on himself.⁶

It should be perfectly clear, therefore, that a marked difference exists between not regarding drug addiction as a crime and allowing individuals unrestricted or legal access to drugs. There is nothing immoral or criminal about drug addiction. But it is highly immoral for society to take a permissive attitude toward a practice so completely destructive of individual and social welfare. The potentially ruinous consequences of large-scale addiction are so great that control of narcotic drugs cannot simply be left to the discretion of the medical profession. Widespread abuses associated with the prescription of barbiturates and tranquilizers are indication enough of what would happen if strict legal controls were removed from the dispensing of narcotics.⁷

A favorite line of permissivist argument is based on the highly questionable legal doctrine that an individual's morals and vices are his own private affair, and that society has no right to invade this domain, either to protect the general welfare or to prevent him from inflicting harm upon himself. This implies a singularly archaic philosophy of law and government strongly reminiscent of the *laissez-faire* approach to the control of communicable diseases. Actually, significant moral behavior impinging on individual and social welfare has *never* enjoyed a sacrosanct status immune from governmental regulation. In fact, the historical evolution of law in our culture reflects our gradually increasing willingness to subject more subtle aspects of socially significant moral conduct to reasonable social control. How else could we explain the much later emergence of laws governing mental health, social security, child labor, and equal access to public services, as compared to laws dealing with such grosser offenses as murder, theft, assault, fraud, and rape?

Legalization of Addiction

Even more central from the permissivists' point of view than the arguments regarding the alleged harmlessness of addiction and the inviolacy of a man's private

vices, is the doctrine that all of the sordid and criminal practices associated with narcotics addiction, and even the very fact of addiction itself, are products of society's allegedly misguided efforts to deny addicts legal access to drugs. The chief burden of their argumentation is accordingly focused on the issue of legalization. "Give (the addict) pure, clean, cheap and legal drugs," and *then* try to motivate him to accept treatment and abandon narcotics, is the essence of their proposals for handling drug addiction.⁸ A more complete statement of the legalization thesis runs something like this:

The present system of legal controls constitutes the primary cause of drug addiction by creating the possibility of making fabulous profits in an illicit market. 'Profit' states the Subcommittee on Drug Addiction of the New York Academy of Medicine, is the 'principal factor in drug addiction.' Hence, the most effective way to eradicate drug addiction is to take the profit out of the illicit drug traffic.⁹ One does this by treating drug addicts on an ambulatory basis in out-patient clinics or in physicians' offices. Addicts who are prepared to undergo withdrawal treatment immediately are so treated; but addicts who are not ready for such treatment are given supportive therapy and provided with legal drugs until such time as they can be persuaded gradually to give them up. 'Incurable addicts' (i.e., those permanently refractory to treatment), on the other hand, are provided with a minimum maintenance dose for the rest of their lives. In this way, since drugs are legally accessible to all addicts at cost the illegal drug traffic vanishes and with it the profit motive that causes addiction. Drug addicts are (then) no longer obliged to turn to crime to support their habits and can lead normal, productive lives.¹⁰

How Important Is the Profit Motive?

"The assertion that the profit motive is the primary cause of drug addiction is excellent Marxism, but poor psychology, bad sociology, and worse logic."¹¹ Although the opportunity for making astronomical profits in the illicit drug traffic undoubtedly motivates the underworld to engage in this traffic, it is no more the primary cause of

narcotic addiction than the profit motive in "murder for hire" is the primary cause of gangland murders. Hence, eliminating the profit motive in drug peddling, by legalizing drug addiction, could be expected to eradicate addiction to narcotics just about as effectively as eliminating the profit motive in hired murder, by legalizing the crime of murder, could be expected to eradicate underworld assassinations.

In the causation of drug addiction the essential elements are an addiction-prone personality and the availability of narcotics, licit or otherwise. If these two conditions exist there will always be drug addicts irrespective of whether morphine is sold illicitly at five dollars, or legally at five cents per grain.¹² We can be certain about this because prior to the passage of the Harrison Narcotic Act in 1914, when narcotics could be bought for pennies over the counter, and when there was no illicit market and no abnormal profit in drugs, the estimated incidence of drug addiction was approximately eight times the current rate.¹³ Hence, if we removed all legal restraints against dispensing narcotics to addicts, the one thing we could be sure of is that we would have at least eight times as many addicts as the estimated 60,000 we have at present, assuming, of course, that the factors affecting the incidence of drug addiction have not changed since 1914; but inasmuch as the crime rate is presently growing five times as rapidly as the American population, an estimate of three million, rather than one-half million addicts, would probably come closer to the mark in forecasting the national addict population in the event that narcotics addiction were legalized.

Legalization and the Illicit Traffic in Narcotics

Not only is there no good reason for believing that legalization of addiction would reduce the number of drug addicts, but there is also no logical or factual basis for the assertion that it would depress, much less eradicate, the illicit market.¹⁴

The expectation that giving addicts legally a minimum maintenance dose would destroy

the illicit market is incredibly naive, and based on lack of understanding of the psychology and pharmacology of opiate addiction. Since the vast majority of seriously disturbed addicts take opiates for the euphoric effects, and since tolerance for these euphoric effects is acquired very quickly, few addicts would be satisfied with the small dosage required to prevent withdrawal symptoms. Unless they received legally as high a dose as they needed to obtain their euphoria, addicts would continue to purchase most of their narcotics on the illicit market and would continue their criminal careers to obtain the money to do so. That legal provision does not eliminate illegal traffic is clear not only from our own American experience with ambulatory clinics after World War I,¹⁵ but also from the experience of China and other Asian countries with serious addiction problems¹⁶ and of such Western nations as Sweden and Great Britain with relatively minor problems.¹⁷

The distribution of legal drugs would, in fact, be welcomed by the illicit market because it would reduce the motivation to seek treatment and would remove "whatever deterrent value lies in the fear of the abstinence syndrome. Always sure of the minimal dosage necessary to prevent withdrawal symptoms, addicts would have little immediate incentive to seek a cure, and nonaddict users and potential addicts perceive (greater attractiveness and) fewer hazards in addiction."¹⁸

The Myth of "Normal Attrition"

The permissivists' assertion that if addiction were legalized for our current crop of known addicts, the drug addiction problem would be automatically liquidated by "normal attrition" once these latter individuals died, is sheer wishful thinking. As long as motivationally immature adolescents continue to approach adulthood in blighted slum areas, to join predatory teenage gangs, and to be encouraged by tolerant community attitudes toward narcotics, large numbers of potential addicts will exist; and as long as this "continuing reservoir" of avid addict candidates is available, black market operations in narcotics will be economically feasible and will flourish.¹⁹ Thus, "unless other things are

done to make drug use less attractive," for each legally supplied confirmed addict who dies off, another home-grown neophyte addict will arise and, in due time, will demand that his name also be inscribed in the golden book of those entitled to receive "pure, clean, cheap," and licit drugs. Actually, assuming that all other causal factors remain constant, the modicum of moral sanction that legalization would give addiction under these circumstances, would undoubtedly serve to recruit more new addicts than could be expected to disappear by normal attrition.²⁰

Reducing the Availability of Narcotics: Effects on Addiction Rate

The folly of making drugs legally accessible to addicts is further highlighted when one considers that measures reducing the availability of narcotic drugs have proven to be our most effective means of controlling the incidence of drug addiction. They are based on one of the oldest, soundest, and most reputable public health procedures known to medicine, i.e., isolation of disease-producing agents from susceptible persons. This same procedure constitutes our principal preventive technique in controlling such diverse diseases as typhoid fever, malaria, botulism, amebic dysentery and lead poisoning; and why it should be considered punitive when applied to the prevention of drug addiction is a mystery that is clear only to the permissivists. It should be obvious that irrespective of the number of susceptible individuals in our midst, not one can become addicted unless he has access to drugs. The incidence of drug addiction, when all other factors are held constant, is everywhere proportional to the availability of narcotics. It is lowest in those states where law enforcement is most severe,²¹ and is highest in the medical and allied professions.²² Since the passage of the Harrison Narcotic Act, the estimated rate of addiction in the United States has declined from one in 400 in 1914²³ to a current rate of one in 3000,²⁴ and the decline was even more pronounced during World War II when illicit narcotics became virtually unobtainable.

The proponents of legalization invariably argue that inasmuch as we still have more drug addicts than any other Western nation after forty years of law enforcement, legal control is futile and should be replaced by legal distribution of narcotics to addicts. This is sheer sophistry because the United States has *always* had a more serious addiction problem than any other Western country with the possible exception of Canada; and, as just pointed out, the rate of addiction in the United States has decreased almost 800 percent since legal controls were instituted. It would be just as logical to maintain that the malaria prevention program in Mexico is a failure because the Mexican malarial rate is still incomparably higher than in Canada, and that the prevention program is the *cause* of the higher rate in Mexico, since Mexico has a program and Canada does not. Or one might argue with equal logic that since jewel robberies still occur today, the law against theft should be repealed and the Government should operate clinics to dispense jewels free of charge to known jewel thieves. That drug addiction still occurs despite reduction of drug availability simply means (a) that [factors] other than availability affect the rate of addiction; and (b) that no single aspect of a prevention program is foolproof.²⁵

Would Drug-Satiated Addicts Lead Normal, Productive Lives?

The permissivists argue that if drug addicts were only permitted legally to gratify their desire for narcotics, they would then be free to lead normal and productive lives, and would not have to turn to crime to support their habits. All of the available evidence, however, indicates that this contention is based on a myth that applies at most to a tiny segment of the total addict population, namely, successful professional persons, usually physicians, who take small doses solely to relieve anxiety. The more typical addict, when permitted to use as much narcotics as he desires, invariably chooses a highly euphoric dose, and is lethargic, semisomnolent, un dependable, devoid of ambition, and preoccupied with grandiose fantasies.²⁶

He loses all desire for socially productive work, exhibits little interest in food,

sex, companionship, family ties, or recreation, and lives mainly in the euphoric glow of his last dose and in anticipation of his next one.²⁷

Compulsory Hospitalization

Lastly, let's consider the issue of voluntary treatment. Critics of mandatory hospitalization claim that it cannot work because the motivation for treating any compulsive or addictive disorder must come from the patient, and hence must depend on his voluntary cooperation.²⁸ It is undeniable, of course, that coercion does have certain undesirable implications and that voluntary treatment would be preferable *if* it were feasible. But since it is both impracticable and dangerous, any person who is sincerely desirous of treating drug addicts in a realistic fashion, as well as of protecting both susceptible nonaddicts from addiction and society in general from the addict's depredations, must necessarily favor compulsory treatment.

First, coercion is²⁹

absolutely essential to ensure the adequately controlled and prolonged treatment prerequisite for cure. Because of the tremendously efficient adjustive value of narcotics for inadequate personalities, the typical addict cannot be relied upon either to initiate or to complete treatment voluntarily as long as he is free to dabble in the illicit market. His judgment can hardly be trusted in view of his immaturity, his inability to tolerate discomfort or forego immediate hedonistic satisfactions, his predominantly favorable attitude toward drugs, and the well-known fact that the euphoric effects of narcotics are heightened when administered during withdrawal.³⁰

The impracticability of voluntary treatment is highlighted by its notable failure wherever attempted. Remarkably few addict physicians spontaneously try to cure themselves despite having narcotics available for self-administered withdrawal therapy. Both the Detroit³¹ and the Chicago³² voluntary out-patient clinics, attracted only a relative handful of clients and those few who did attend were apathetic, weakly motivated, unreliable, and irregular in keeping appointments.³³

Social Hazards of Voluntary Treatment

A second important reason why vol-

untary treatment is unfeasible is that the active, unhospitalized addict is not only free to patronize the illicit market, but is also in a position to introduce the habit to other addiction-prone individuals and to support the high cost of his addiction by stealing from the public. Epidemiological studies have demonstrated beyond any doubt that both initial addiction and subsequent relapse to the use of drugs are precipitated principally by direct social contact of addicts with susceptible non-addicts—not by pushers or as a by-product of the treatment of medical conditions with narcotics.³⁴ Simply by practicing the habit, they provide a necessary behavioral model for potential addicts as well as an approving social milieu in which narcotics addiction can be acquired. Even if confirmed addicts never attempted to proselytize or peddle drugs, they would still propagate their disease without making any more special effort to do so than Typhoid Marys make in spreading typhoid fever.

In dealing with addicts, therefore, it is thoroughly defensible to employ the well-established legal and public health principles of compulsory treatment, prophylaxis, and quarantine that are applied to all dangerous, communicable diseases. Society has long since discredited the permissive doctrine of voluntary consent to preventive and therapeutic measures in such diseases. Patients with measles and scarlet fever are legally quarantined, vaccination against smallpox is obligatory, lepers and the criminally insane are isolated in special institutions, and patients suffering from syphilis and tuberculosis are required to submit to treatment. Similarly, when individuals are unable to impose internal controls in relation to behavior that is either self-destructive or socially dangerous, society has an obvious duty to impose external restraints. Psychotics with suicidal or homicidal tendencies, and active pyromaniacs, for example, are not given any choice about whether to accept treatment, and are invariably treated in closed institutions. In the light of this honored public health tradition,

which represents the hard-earned triumph of a long and bitter struggle against the forces of ignorance, superstition, social apathy, and misguided individualism, it is little short of incredible to find certain prominent representatives of the medical, legal, and psychological professions advocating that a narcotics addict be hospitalized only “*when and if he signifies a willingness to try.*”³⁵

Outpatient Narcotic Clinics

Realistic and effective treatment of drug addiction not only requires compulsion, but also prolonged commitment of addicts to special closed-ward hospitals that can guarantee a drug-free therapeutic environment and an intensive program of rehabilitation. It is utterly naive to expect addicts treated on an ambulatory basis voluntarily to adhere to a withdrawal schedule, when even those addicts who voluntarily seek hospitalization almost invariably try to smuggle drugs into the hospital. Also, without continuous observation by trained personnel in a controlled clinical setting how can proper dosage schedules be determined? Ambulatory treatment, furthermore, requires either that clients report four or five times daily for injections or that they be given drugs for self-administration. The first procedure is unwieldy and incompatible with normal vocational and family existence, and the second procedure is hazardous. Addicts may hoard or sell their daily ration or inject it intravenously.³⁶

Outpatient clinics are also in no position to provide prolonged and intensive vocational training, and the average American physician is ill-prepared at present to diagnose or treat drug addicts competently; it would thus be catastrophic if he were permitted to do so. The drug addiction problem in the United States is much too serious to afford American physicians the opportunity of emulating the blunders of their English brethren. Lastly, because of the deleterious effects of narcotics on drives, ambition, responsibility, and desire for work, the prognosis for social rehabilitation is much better when the addict under-

going treatment is completely withdrawn from drugs.³⁷

Still another potential danger inherent in ambulatory treatment is the fact that practically every addict is an accomplished past master both at rationalizing his addiction on medical grounds, and at simulating medical conditions (e.g., renal colic, coronary occlusion) for which narcotics are customarily prescribed. Hence, if we were to establish narcotic clinics which were to be administered by physicians, who nurtured sentimentally permissive and unrealistic attitudes about the addict's medical rationalizations for demanding narcotics—even when these rationalizations were questionable on medical grounds—we would be guilty of supplying addicts with drugs until doomsday, without making the slightest progress toward curing them.

Arguments Against Compulsory Hospitalization

What are some other arguments raised against compulsory hospital treatment of drug addicts? First, it is frequently alleged that it is punitive to advocate mandatory hospitalization for drug addicts until rehabilitation is effected, because adopting this position is tantamount to favoring a "life sentence" in most instances.³⁸ It should be perfectly clear to any unbiased observer, however, that the question of punitiveness in this connection hinges on the *intent* of society's actions, rather than on their consequences, or on the addict's possible warped interpretation of the purposes of hospitalization. The possibility that hospitalization might have to be a life-long matter for many addicts is a reflection of the inherently poor prognosis of the disease rather than of a punitive attitude on the part of those who advocate hospitalization. If we applied this same argument of the permissivists to present methods of treating leprosy, advanced cases of tuberculosis, senile dementia, and chronic schizophrenia, we would also have to indict society as punitive for requiring indefinite hospitalization of many patients suffering from these diseases.

Second, it is charged that compulsory

hospitalization has been a total failure, and that the relapse rate at the federal hospitals is "in excess of 90 per cent."³⁹ Actually, the relapse rate at the Lexington Hospital is just under 75 per cent.⁴⁰ But even under the best of circumstances, the prognosis for cure in drug addiction is relatively poor, both because of the serious underlying personality disorder, and because of the highly efficient adjustive value of euphoric drugs for this disorder. Nevertheless, despite the inherently unfavorable prognosis, the recovery rate would undoubtedly be substantially higher if we could eradicate the prison atmosphere and punitive attitudes that currently prevail in the federal hospitals; if we could provide more adequate vocational rehabilitation, and follow-up services than these hospitals presently furnish; if we could abolish the criminal stigma associated with addiction; and if we could reduce the high availability of and favorable attitudes toward drugs in the communities to which addicts return.

There are also good reasons for believing that the personality maturation of the drug addict is retarded rather than permanently arrested, and hence that improvement can be expected with increasing age if a favorable drug-free environment could be provided. As Dr. Gamso, former Superintendent of Riverside Hospital, points out, even quite young addicts often make very satisfactory vocational adjustments within a highly structured institutional situation;⁴¹ and in the course of my psychiatric work at the Lexington Hospital, I was frequently impressed by the excellent work records in industry which many of my older patients were able to maintain without drugs during the war emergency years—when illicit narcotics were difficult to obtain and the desperate need for manpower abolished many discriminatory practices.

In any case, even a recovery rate of twenty-five per cent is better than a defeatist approach that seeks to treat addicts by providing them legally with drugs until they "feel ready" to give them up, which

in effect means indefinitely. If the prognosis is poor *with* compulsory hospitalization, it is self-evidently very much worse *without* it. It is hardly within the medical tradition to advocate that serious attempts at treating a given disease be abandoned simply because its prognosis happens to be poor. We do not complain about the futility of hospitalizing patients with such chronic, prognostically unfavorable diseases as cancer, arthritis, epilepsy, schizophrenia, and multiple sclerosis; and often-times we are successful in effecting cure or significant remission. But even in instances where rehabilitation is impossible, truly incurable addicts are both decidedly better off as individuals, and less dangerous to society, when hospitalized for life in a humane, progressive institution, than when legally provided with a maintenance dose of narcotics and left free to deal in the illicit drug market, to wallow in a dreamy state of self-defeating, drug-induced euphoria, to spread the drug habit to other susceptible individuals, and to prey upon the public.

A third argument against compulsory hospitalization is the high cost of building and operating the necessary hospitals. But does not the same argument also apply to the treatment of mental disease, cancer, multiple sclerosis, and epilepsy? Have we been legitimately deterred by cost from hospitalizing patients suffering from these diseases? In considering the daily per patient cost of perhaps \$30.00, we should also bear in mind that the average addict steals at least this much every day to support his habit. Judge Herlands has estimated that 35 per cent of the cases calling for sentences of incarceration in the federal courts involve drug addicts. This percentage is much higher still in the lower courts, in relation to such crimes as shoplifting, house breaking, "paperhanging," and bunko. The savings accruing to society by reducing the frequency of these crimes, would, in my opinion, more than offset the cost of hospitalization.

Concern has often been expressed that enforced hospitalization would result in

substantial economic loss to the "many" addicts who allegedly "are working rather regularly."⁴² But apart from the rare physician or lawyer addict who uses small doses of narcotics solely to allay his anxiety (rather than for their euphoric effects), I can recall precious few addicts who worked regularly, even on a part-time basis, at legitimate occupations. For one thing, even if the motivation for regular, honest employment were present, which in itself would be quite remarkable for an addict on drugs, the earnings from such employment would rarely be sufficient to support a narcotics habit.

Finally, it is alleged that the patient "in an artificial drug-free environment separated by stone walls and iron bars from the area where his addiction was born and nurtured," makes relapse inevitable when he is discharged from the institution.⁴³ I agree that it would be nicer all around *if* addicts could be realistically withdrawn from narcotics and treated effectively on a voluntary, out-patient basis; but since these procedures simply do not work, for reasons already specified, realistic physicians are obliged to use procedures that do, rather than predicate their choice of treatment on "iffy" premises that can never materialize. It would similarly be pleasanter if psychotics with homicidal or suicidal tendencies could be treated in out-patient clinics, but who wants to accept responsibility for the consequences?

It is also quite unnecessary to accept the entirely gratuitous assumption that the provision of an artificial treatment environment necessarily guarantees relapse once the patient returns to his normal home environment. Oxygen tents are provided for acute pneumonia and coronary patients, respirators for patients suffering from bulbar poliomyelitis, and a simplified social and occupational environment for mentally-ill patients; yet merely because these patients find these artificial measures helpful and even necessary in the acute stages of the disease, does not mean that they will require them indefinitely and

hence relapse when released from the hospital. Any training situation or intensive treatment program necessarily requires initial artificial simplification of the problems that the individual must eventually face unsimplified in the real world; but without this initial simplification he would never be able to acquire the resources that he needs to survive and function adequately. This is especially true in the case of the narcotics addict, because he typically lacks the normal motivational, vocational, emotional, and social resources necessary for satisfactory adaptation to a complex world without a full-time chemical crutch.

The Dole-Nyswander "Treatment"

Now I am sure that many of you are thinking that the recent Dole-Nyswander findings contradict everything that I have just said about compulsory, closed-ward treatment of drug addiction. But do they? Let Dole and Nyswander speak for themselves in their article in the August 23, 1965 issue of the *JAMA*.

First, by their *own* admission, Drs. Dole and Nyswander are administering *massive* doses of methadone to known heroin addicts. This goes far beyond anything contemplated in the "British System." The Rolleston Committee Memorandum of 1926 (as well as the more recent Brain Report), which governs the present administration of Britain's Dangerous Drugs Act of 1920, provides that narcotics may be legally administered to addicts by physicians "where it has been . . . demonstrated that the patient, while capable of leading a useful and relatively normal life, when a certain *minimum* dose is repeatedly administered, becomes incapable of this when the drug is *entirely* discontinued."⁴⁴ Technically, this interpretation is consistent with the Dangerous Drugs Act, because physicians may give only *minimum maintenance* doses it is still illegal in Britain to prescribe narcotics *solely for the gratification of addiction*. Although this interpretation of the law is technically correct, many physicians in the United Kingdom *actually* give addicts sufficient narcotics to gratify their euphoric needs, since the authorities

demand no proof that the treated addicts in question are actually leading "normal and useful lives," or that the drug is, in fact, essential for this purpose and is also given in "minimum maintenance doses." But at least the law in Britain is technically respected, and Britain technically fulfills her international obligations to the United Nations.

But the Dole-Nyswander approach makes absolutely no pretense of administering minimum maintenance doses. They are, in my opinion, simply substituting the euphoric action of methadone for the euphoric action of heroin by administering massive doses of the former. There is no pretense of simply using a *maintenance dose*, which, by definition, is the smallest dose necessary to prevent withdrawal symptoms.

Research at the Public Health Service Hospital at Lexington, Kentucky has unequivocally proven that methadone has all of the euphoric properties of morphine, except perhaps in lesser degree.⁴⁵ Nyswander⁴⁶ herself admits that methadone "differs from morphine only in that the withdrawal symptoms are milder," and that "for some addicts Demerol or methadone is actually the drug of choice." She concedes that "addicts readily accept (methadone) as a substitute for morphine."

Although Dole and Nyswander⁴⁷ acknowledge that abstinence symptoms could be controlled in all of their patients by administering a maximum of 10-20 mg. of methadone orally, twice daily, 16 of their 22 patients were later "stabilized" at 100 to 180 mg. daily. This is pharmacologically equivalent to five to nine grains of morphine daily, or equivalent to a moderate morphine drug habit. "Stabilization," in other words, is just a euphemistic term to indicate that when heroin addicts receive a sufficiently high euphorogenous dose of methadone, they no longer have any craving for the euphorogenous effects of heroin. Why should they? It is much safer and cheaper to receive 100-180 mg. of methadone daily, legally and "for free" at the Rockefeller Institute, than to seek its equivalent "kick" value from illicitly

purchased heroin at a cost of approximately \$100 daily.

How can Dole and Nyswander explain the discrepancy between the 20-40 mg. of methadone necessary to suppress the withdrawal symptoms associated with heroin addiction, on the one hand, and the "stabilization" dosage of 100-180 mg. in 16 of their 22 patients, on the other, without conceding that the difference between the two dosage levels gratifies the need for the drug-induced euphoria that their "treatment" allegedly abolishes? They even "complain" in their article that some patients failed to tolerate the gradual build-up of methadone dosage from the initial 20-40 mg. daily to the "stabilization level" which, in most cases, varied from 100 to 180 mg. These latter patients had to be raised to the "stabilization" (euphoric) level even more gradually, so as to avoid oversatiation, urinary retention, and abdominal distension.⁴⁵

It is abundantly clear to any unbiased observer, therefore, that one does not cure a craving for heroin-induced euphoria by substituting a methadone-induced euphoria that is euphemistically labeled "stabilization dosage," and by then asserting that this latter state is "normal" and should be perpetuated indefinitely. I fail to appreciate how legalized addiction is any improvement over illicit addiction. Morally, in fact, it is much less defensible, because it indicates that society is actively abetting the well-proven personality deterioration and social demoralization that have invariably accompanied narcotic addiction over the past 350 years.

What about the assertion that with this "treatment" regimen, i.e., a single massive oral dose of methadone, patients are converted into useful, socially productive citizens?⁴⁹ As Dr. Vogel⁵⁰ points out, this is a rather tenuous conclusion to reach when ten of twenty-two cases have been followed over a period of less than two months, and the other twelve for varying periods up to fifteen months. The authors, of course, formally qualify their conclusions, by stating in the introduction to the

JAMA article, that "this paper is only a progress report, based on treatment of twenty-two patients for periods of one to fifteen months."⁵¹ But if they consider this "only a progress report," how do they explain the unqualified conclusions stated at the end of the article, and how do they reconcile the three feature articles in *Look*⁵² and *The New Yorker*,⁵³ obviously prepared with their consent and cooperation, with the tentative nature of a progress report? Millions of people throughout the United States have been led to believe by these mass-circulation journals, that the menace of drug addiction is now comparable to that posed by poliomyelitis after the discovery of the scrupulously tested oral vaccine against that latter disease. Furthermore, are not addicts, supplied with free, licit, euphoric doses of narcotics, highly motivated to create an *impression* of complying with their benefactors' expectations.

How seriously, also, can we take the statements of addicts that they experience no euphoria with massive ("stabilization") doses of methadone? *Most* narcotic addicts claim that they use drugs solely to "remain normal" (i.e., to avoid withdrawal symptoms); both Dr. Nyswander and I know this from our psychiatric experience at Lexington. However, we both know, also, that experimental readdiction studies at the Lexington Hospital incontrovertibly established the euphorogenous action of methadone when given in doses above 40 mg. daily.

Lastly, the conclusion that "maintenance of patients with methadone is not more difficult than maintaining diabetics with oral hypoglycemic agents"⁵⁴ is hardly warranted by the evidence. Dole and Nyswander admit that some patients have "difficulty spanning a 24-hour period with a single dose" and have to be given medication to take at home.⁵⁵ In addition, they openly concede that ambulatory patients "have been given enough medication for a week-end at home or a short trip."⁵⁶ What is to prevent such patients from selling their medication on the illicit market

or from taking the entire supply in one dose? And the only reason why closed-ward administration of narcotics for withdrawal purposes appears to be unnecessary for adequate clinical observation and regulation of dosage at the Rockefeller Institute, is that the Dole-Nyswander treatment is not directed toward withdrawal therapy but toward the permanent induction of methadone-induced euphoria, generated by doses from two to nine times higher than the minimum maintenance dosage required to prevent abstinence symptoms.

Conclusions

Compulsory, closed-ward treatment, emphasizing adequate vocational training and follow-up services, and implemented through the same civil commitment procedures used for the mentally ill,⁵⁷ is the only feasible method of medically treating narcotic addicts. Mandatory hospitalization of drug addicts is also necessary to prevent the spread of addiction to addiction-prone nonaddicts, and to protect the public from the depredations of addicts. This type of program is completely free of the objectionable punitive bias that both permeates our present federal, state, and local laws regarding drug addiction, and undermines our present federal program of narcotics hospitals. At the same time, however, it avoids the sentimental, laissez-faire approach of the permissivists, and their thoroughly unrealistic and unfeasible proposals for the legalization of addiction and for voluntary, out-patient narcotic clinics. Let us not be distracted by the misleading arguments, the fallacious analogies, and the empty blandishments of the permissivists, from missing this golden opportunity to take a significant step forward in treating our drug addicts effectively and humanely, in preventing the spread of narcotics addiction to susceptible individuals, and in protecting the public from the predatory activities of addicts on the prowl.

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46. Marie Nyswander; *op. cit.*, 1956, pp. 25-26.

47. V. P. Dole and Marie Nyswander, "A Medical Treatment of Diacetylmorphine (Heroin) Addiction." *JAMA*, 193: 646, 1965.
48. *Ibid.*
49. *Ibid.*
50. Dr. V. H. Vogel Letter to the Editor, *JAMA*, "The Treatment of Drug Addiction." *JAMA*, Nov. 8, 1965, 194, No. 6.
51. Dole and Nyswander, *op. cit.*, 1965.
52. *Look*, Nov. 30, 1965, pp. 23-27.
53. *New Yorker*, June 26, 1965, pp. 32-77; July 3, 1965, pp. 32-51.
54. Dole and Nyswander, *op. cit.*, 1965.
55. *Ibid.*
56. *Ibid.*
57. For the outlines of such a plan, see R. H. Kuh, "Dealing with Narcotics Addiction," *New York Law Journal*, 144, June 8, 9 and 10, 1960.



Commentary on the above paper

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AFTER ACKNOWLEDGING THE MANY inter-related and controversial issues germane to the management of drug addiction, Dr. Ausubel chooses to restrict his remarks, first, to a critique of the philosophy of permissiveness; and, second, to a polemic for compulsory closed-ward treatment. Drug addiction is a disease requiring treatment and not a crime requiring punishment. It is regrettable that the U.S. Public Health Service agreed in 1935 to retain the criminal status of addiction in the mistaken idea that this was the only means of achieving compulsory treatment and supervised rehabilitation. As a consequence, the federal addiction hospitals have developed a prison-like atmosphere which obstructs attitudinal improvement within the institution, as well as rehabilitation later, because of the social stigma attached to quasi-exconvicts.

The acceptance of addiction as a personality disorder, however, does not exonerate permissiveness. The habitual use of certain drugs is detrimental to the well-being of both the individual and society, and is, therefore, pernicious. Although there is nothing immoral or criminal about drug addiction *per se*, it is highly immoral for society to adopt a permissive attitude toward such a deleterious practice.

The permissivist argument that an individual's morals and vices are his own private affair, sacrosanct and inviolable, is fallacious. It is analagous to the laissez-faire approach to the control of communicable diseases and contrary to the ethos of a culture from which have evolved laws governing public health, child labor, and social security.

According to Dr. Ausubel, the permissivists think that addiction and all the sordid and criminal practices associated with it stem from society's misguided efforts to deny drug addicts legal access to drugs. He quotes from the 1963 New York Academy of Medicine report which says: "Profit is the principal factor in drug addiction." His reply is: "The assertion that the profit motive is the primary cause of drug addiction is excellent Marxism, but poor psychology, bad sociology and worse logic."

One must note that Dr. Ausubel translates "principal factor" as "primary cause." Webster defines "factor" as "one of the elements that contribute to produce a result, a constituent." "Cause" is defined as "That which occasions or effects a result." Whether this semantic nuance is important here, I leave to the audience.

Dr. Ausubel contends that as long as there are addict-prone personalities and

an availability of narcotics, licit or illicit, there will always be drug addicts. Prior to the Harrison Act of 1914 when the illicit market was negligible and narcotics were cheap and easily accessible, drug addiction flourished.

A further argument against legalization of addiction is the fact that the vast majority of addicts would not be satisfied with maintenance dosages, and would still purchase most of their drugs from an illicit market to achieve the euphoria they seek. Legalization of drugs for addiction would reduce the incentive of the addict to undergo treatment because he could always be sure of the minimal dosage necessary to prevent withdrawal symptoms. This state of affairs would likewise be welcomed by illicit marketers.

The permissivist contention that legalized addiction for our current crop of addicts would solve the drug problem by normal attrition is wishful thinking. As long as immature adolescents grow up in slum areas, potential addicts always exist. Legalization would serve to recruit more new addicts than could be expected to disappear by normal attrition.

The incidence of drug addiction is everywhere proportional to narcotic supplies. It is lowest in states of highest law enforcement and highest in the medical and allied professions. The decline of incidence from 1 in 400 in 1914 to the current rate of 1 in 3,000 amounts to a decrease of 800%. That drug addiction is still with us simply means that no single aspect of a preventive program is foolproof, not that law enforcement has failed.

The permissivist theory that if addicts were given legal gratification they could lead normal, productive lives applies only to a minuscule segment of the total addict population.

Critics of mandatory hospitalization insist that motivation for treating an addictive disorder must come from the patient and depends on his voluntary cooperation. Certainly voluntary treatment would be ideal, but in practice it proves both dangerous and impracticable. Only coercion

can insure the adequately controlled and prolonged treatment requisite for cure. Addicts cannot be trusted either to initiate or to complete treatment voluntarily if they have free access to the illicit market. Furthermore, epidemiological studies have established irrefutably that direct social contacts of addicts with susceptible individuals provide the principal precipitant of addiction.

Realistic and effective treatment must be prolonged, as well as compulsory, in special closed-ward hospitals that can guarantee a drug-free, therapeutic environment, and an intensive program of rehabilitation. Out-patient clinics cannot provide prolonged, intensive vocational training nor can the average American physician do more than emulate the blunders of his British brethren in diagnosing and treating addicts.

There are four main arguments against compulsory hospital treatment. First, it is alleged that such treatment is punitive since mandatory hospitalization is accomplished, amounts, in most cases, to a life sentence. But this possibility is a reflection of the poor prognosis of the disease rather than of a punitive measure. The current recovery rate could be significantly improved if the prison-like atmosphere and punitive attitudes of federal hospitals could be eradicated, and if intensive vocational training and follow-up services could be improved beyond what these hospitals currently offer.

Cure or significant remission is often possible, but even when the addict is incurable, he is less a danger to himself and to society if hospitalized in a progressive, humane institution rather than free to support the illicit drug market, spread the drug habit to others, and prey upon the public.

A third argument against compulsory hospitalization is the high cost. Yet this same argument applies to the treatment of mental illness, cancer and other chronic diseases.

It is said that the patient turned out from the artificial environment of a hospital will inevitably relapse when he returns to the area wherein his addiction was born

and nurtured. Oxygen tents are provided for cardiac patients, ventilators for respiratory impairment, and simplified social and occupational environments for mental illness in the acute phase of these diseases. An intensive treatment program is necessary in the acute phase of any disease if the patient is ever to acquire the resources to return eventually to the real world. This is especially true of the addict who typically lacks the normal motivational, vocational, emotional, and social resources basic for adaptation to a complex world without a full time chemical crutch.

The final section of Dr. Ausubel's paper

is given to the Dole-Nyswander methodology. The essence of the author's opinion is that this treatment simply substitutes the euphoric action of methadon for that of heroin, goes far beyond the British system, and replaces illicit addiction with legalized addiction. Since this section of the paper is very similar to Dr. Ausubel's views published in the *J.A.M.A.* of March 14, 1966 under "Critical Commentary" and since Dr. Dole and Dr. Nyswander have answered his criticism in the same issue under "Letters to the Editor," I shall leave this hot potato smoldering in the coals.



Study of methadone as an adjunct in rehabilitation of heroin addicts

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DURING THE PAST TWO YEARS the addiction research units at Rockefeller University and Beth Israel Hospital (Manhattan General Division) have utilized a narcotic medication in treatment of heroin addicts. The measures of success in this study, as in other rehabilitation programs, are changes in social attitudes and behavior. Stopping heroin usage, leaving the addict community, ending a career of theft, are considered partial successes, necessary first steps toward rehabilitation. Although the ultimate success of this or any other treatment cannot be determined on the basis of only two years experience, enough time has passed to define the initial response of addict patients to maintenance treatment, and this is the subject of the present report.

The main question at issue was whether

prescription of a narcotic medication as part of a medical program would do more than merely satisfy a hunger for narcotic drugs. A common misunderstanding of the medical approach has been the belief that prescription of medication would do no more than gratify a bad habit, and therefore that it could not possibly contribute to rehabilitation. This false assumption has closed the field to maintenance research for about forty years. Admittedly a narcotic drug can be unwisely prescribed, but the same is true of other useful medicines in the pharmacopeia. The value of a medicine, however, must be judged, not by the consequences of misuse, but by the results

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that are obtained when it is knowledgeably prescribed for specific indications.

Methadone, as administered in the maintenance program, does not produce euphoria, sedation, or distortion of behavior. The patients remain alert, functionally normal as judged by performance in school and at work, subject to normal anxieties and grief, and are found within normal limits on neurological and psychometric examinations. In fact, a careful study has not yet revealed any physiological or psychological test capable of distinguishing patients stabilized on methadone from controls of the same age and social background. These negative findings may seem inconsistent with the well known narcotic effects of methadone, but the differences are due only to differences in pharmacological conditions. A narcotic effect, or absence of effect, depends on the degree of narcotic tolerance at the time of injection. Single doses of methadone given to nontolerant subjects, or injections self-administered by addicts at irregular intervals, cause euphoria. On the other hand, with regular daily administration of methadone in adequate dosage, patients can be maintained in a state of sufficient tolerance to block the narcotic effects of opiate-type drugs, including methadone itself. The degree of tolerance induced by a narcotic varies with the particular drug, the dose, and the time elapsed since last administration; with heroin or morphine, even in large dosage, the refractory state lasts only one to four hours. Addicts, therefore, can experience recurrent euphoria with repeated injections of heroin, whereas patients given the much longer-acting methadone according to the fixed schedule of the maintenance program remain refractory. The rationale of the maintenance treatment thus is maintenance of a fixed blockade against the euphorogenic potential of heroin.

We have been surprised to find that addict patients are willing to take regular doses of a medicine that blocks euphoria, but such has been the case. Only one of 91 patients, all voluntary, has asked to

leave the maintenance program, and he applied for readmission having become readdicted to heroin two weeks after withdrawal. We have no explanation for the consistent acceptance of the treatment program. It is known of course that narcotic drugs induce a variety of metabolic effects other than production of euphoria (including changes in tissue enzyme levels, and in endocrine balances), and it is possible that relief of narcotic hunger is more important than euphoria, but all this at present is only conjecture. Until the metabolic actions of narcotics are better defined by laboratory studies and related to drug hunger, the use of methadone in treatment of addiction must be based on the empirical evidence of clinical studies.

A recent survey of the program showed that 40 of the 79 patients who had been under treatment for three months or longer are now regularly employed or at school (or both). The remaining 39 patients have made less social progress up to the present time—most of them receive support from City Welfare—but at least they are not living by criminal activity, or in the streets, hospital wards or jails. The addicts entering this program were chronic, "mainline" users of heroin, failures of previous treatment—most of them school dropouts with history of repeated hospitalizations, irregular or no employment, years in jail, alienated from their families. We consider the results encouraging.

To what extent the social problems of the addict reflect fundamental inadequacies antedating addiction, and perhaps causal to it—or, on the other hand, are symptoms of arrested development, lack of normal social experiences and education during the period of addiction—cannot be determined at the present time. Most of the patients in the program are continuing to progress in social adjustment, in vocational training and employment, and in acceptance of responsibility. Any prediction as to the endpoint of their rehabilitation, or the duration of maintenance, would have to be based on theory rather than experience.

We wish to emphasize, therefore, that the treatment is still in the research stage. Like any new treatment, methadone therapy needs extensive study by clinical

investigators before it can be recommended for general use by the medical profession. Rehabilitation takes time; our clinical study is only two years old.



Pharmacologic factors in relapse and the possible use of the narcotic antagonists in treatment

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THE MAJOR PURPOSE OF THIS PAPER is to discuss the possible role of certain pharmacological factors in relapse to narcotic analgesics, as well as possible ways in which these factors can be medically controlled. The term "possible" needs to be emphasized. Drug addiction is such a complicated process that it is difficult to assess the relative importance of a number of factors, including the ones that are the subject of this paper, in the genesis of addiction and relapse.

There are two consequences of chronic intoxication to narcotic analgesics that may play a role in relapse. The first is that addiction to morphine can produce long-lasting physiological changes, which have been called secondary or protracted abstinence, and the observation that these changes are associated with a long-lasting need for narcotics. The second is that abstinence can be conditioned and that the evoking of conditioned abstinence may give rise to drug-seeking behavior.¹

Before describing the characteristics of secondary abstinence, it will first be necessary to tell you something about the effects of morphine in the rat, which has been the experimental animal used almost exclusive-

ly in the addiction studies to be reported today, as well as something about primary abstinence.² When morphine is administered hypodermically to the rat, a variety of changes may be produced, depending on the dose and depending on the degree of tolerance that has developed. In small to moderate doses, morphine produces a curious mixture of depression and excitation consisting of analgesia, decreased speed with which the rat can solve problems, but increased spontaneous activity, as well as increased body temperature and metabolic rate. With very large doses of morphine, a very severe depression results. The animal may remain immobile, respiration is depressed, there is profound analgesia, the animal may be comatose, and body temperature falls markedly. When morphine is administered chronically, tolerance develops to the depressant effects, and certain stimulant effects predominate. In short, morphine in the tolerant rat produces hyperactivity, as well as an increase in body temperature and metabolic rate.

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When morphine is withdrawn from rats that have become tolerant to its depressant effects, a rather typical and reproducible abstinence syndrome emerges. This abstinence syndrome has two phases, which have been called primary and secondary, or alternatively, early and protracted abstinence. The early abstinence syndrome is characterized by a fall in body temperature, which may reach subnormal levels, and a decrease in metabolic rate. In addition, the animals will stop eating and drinking, lose weight precipitiously, exhibit diarrhea, and become quite irritable. The animals are also less active; however, the decrease in activity should not be mistaken for sedation, for the withdrawing rat is less likely to assume a sleep posture than comparable nonabstinent control rats. Finally, the rats show an increased number of what have been called "wet-dog" shakes, so named because they resemble a wet dog shaking off water.

By the fourth or fifth day following withdrawal, the character of the abstinence syndrome begins to change, and secondary or protracted abstinence emerges. During protracted abstinence, the rats continue to show an increased number of wet-dog shakes, are more active than comparable control animals, and have difficulty in sleeping; however, body temperature and metabolic rate increase and more food and water are consumed. Many of these changes are illustrated in Figure 1. As can be seen, protracted abstinence lasts from four to six months. Even 180 days after withdrawal, the addict rats still show some abnormalities.

For the time being, let us leave these experiments and turn to a second group of experiments which have been performed by Wikler and Pescor³ which bear on the issue of conditioned abstinence and relapse in the rat. In this complex experiment, four groups of rats were studied. Two groups were addicted to 200 mg of morphine a day and compared with two comparable control groups. One of the addict groups was allowed to become abstinent in a linear maze that had a tube of drink-

ing water containing a potent narcotic (etonitazene) and a flavoring agent (anise) at one end, and a tube containing plain drinking water at the other end. The rats were trained on alternate nights in one or the other end of the linear maze, such that they could learn that their abstinence was relieved by the anise-flavored drinking water but not by the plain drinking water. A control group of nonaddict rats underwent similar training periods. In addition, there was an addict and a non-addict control group that never participated in training exercises in the linear maze. Following abrupt withdrawal from morphine, all groups were placed in the linear maze and given access to both the etonitazene solution and the water at times corresponding to the 9th, 23rd, 48th, 71st, 106th and 142nd days of abstinence. The trained addict rats, namely those who learned to relieve their abstinence by drinking anise-flavored water, showed the greatest number of wet-dog shakes when placed in the linear maze. These results are consistent with the hypothesis that abstinence can be conditioned and that the environmental circumstances in which abstinence is relieved can serve as a conditioned stimulus. Secondly, both the trained and untrained addict rats consumed more etonitazene than did the nonaddict rats for as long as 142 days. Wikler and Pescor³ concluded that "addiction *per se* disposes to relapse regardless of the roles of classical conditioning of abstinence phenomena and operant conditioning of opioid drinking behavior."

Before leaving the subjects of protracted and conditioned abstinence, two additional points should be made. The first is that the signs of protracted abstinence are small in magnitude and cannot be diagnosed clinically at the present time. They have only been demonstrated by comparing groups of addict rats with nonaddicts. Secondly, although the presence of conditioned abstinence does not have a marked effect on the quantity of opiates consumed over a 12-hour period, it may be inappropriate to assess the effect of a phasic

conditioned response by measuring opiate consumption for such a long period of time. It is reasonable to assume that both protracted abstinence as well as conditioned abstinence could increase the probability of drug experimentation in abstinent addicts. Once drug-taking behavior has been reinitiated, the well-known pharmacological properties of the narcotic analgesics act to perpetuate this behavior and make total relapse certain.

I would now like to tell you something about some experiments concerned with the possible use of narcotic antagonists in the treatment of addiction.⁴ As many of you know, the narcotic antagonists have a low abuse potentiality and possess pain-relieving properties. For these reasons, a large amount of effort has gone into their study with the hope of finding a nonaddicting analgesic; however, their clinical usefulness has been limited by the fact that they

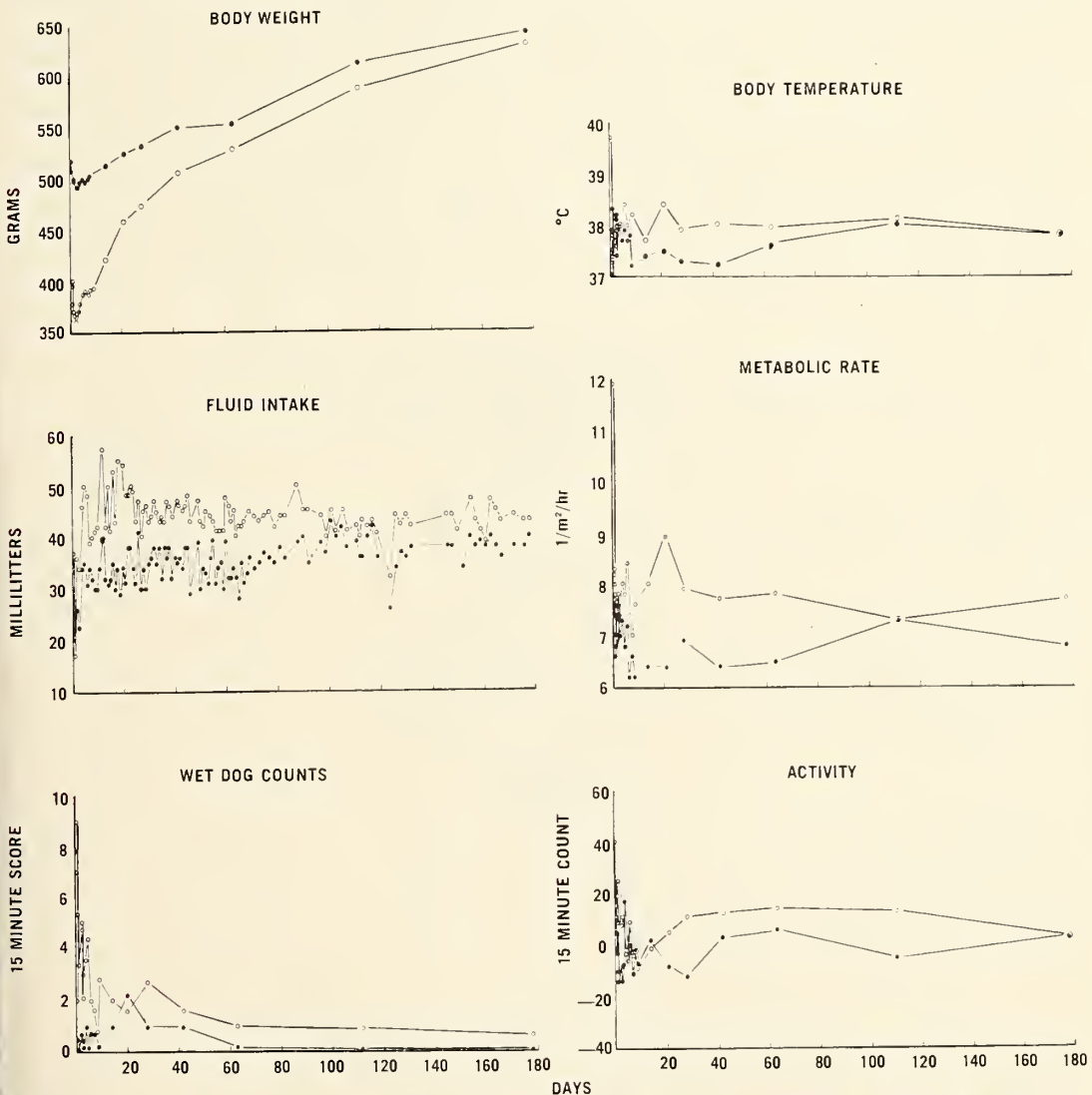


FIGURE 1. The time course of secondary or protracted abstinence signs. Open circles indicate mean values for 7 abstinent rats, while

closed circles represent the mean values for 4 saline controls. These data are from a study by Martin et al.²

produce a number of undesirable subjective changes, including dysphoria, sedation and drunkenness. In assessing the abuse potentiality of the narcotic antagonists cyclazocine and nalorphine, it was found that when they are administered chronically a very high level of tolerance develops to their ability to produce dysphoria, sedation and drunkenness.⁵ Further, it was found that associated with the development of tolerance to the subjective effects was a concomitant development of physical dependence; however, the abstinence syndrome of the analgesic narcotic antagonists is quite atypical and is qualitatively different from the morphine abstinence syndrome. One of the most important differences is that the abstinence syndrome is quite mild and is not associated, as far as we can judge, with any drug-craving or drug-seeking behavior. Despite the fact that a high level of toler-

ance develops to the subjective effects of narcotic antagonists, tolerance does not appear to develop to the ability of these agents to antagonize the effects of morphine. Figure 2 compares the effects of morphine in subjects before and while they were receiving cyclazocine in a dose level of 2 mg. twice daily orally. This level of cyclazocine in non-tolerant subjects produces very severe behavioral changes. To avoid these changes, patients were started at a very low dose (0.1 mg b.i.d.) which was slowly increased, allowing tolerance to develop. As can be seen, the effects of 60 mg of morphine in cyclazocine-protected subjects, are less than the effects of a liminal euphrogenic (10 mg) dose of morphine in unprotected subjects. These same subjects while still receiving cyclazocine chronically were given morphine in rapidly increasing dose levels such that they were receiving 240 mg per day within 11 days. They were stabilized

EFFECT OF CHRONICALLY ADMINISTERED CYCLAZOCINE ON
MORPHINE-INDUCED SUBJECTIVE, OBJECTIVE, AND PUPILLARY CHANGES

MORPHINE (Mg/70Kg)	STUDY B CONTROL		CYCLAZOCINE STABILIZED	
	10	30	60	120
	SUBJECTS			
FEEL MEDICINE	57%	97%	50%	93%
IDENTIFIED AS A NARCOTIC	30%	97%	50%	67%
OPIATE SYMPTOMS	7.3	19.5	5.8 ^b	13.0 ^b
PATIENTS' LIKING	3.0	9.2	3.3 ^b	5.8 ^b
	OBSERVERS			
FEEL MEDICINE	67%	100%	47%	93%
IDENTIFIED AS A NARCOTIC	63%	100%	47%	93%
OPIATE SIGNS	12.5	29.7	14.5 ^b	23.0
OBSERVERS' LIKING	4.8	11.7	3.7 ^b	8.3
PUPILS	6.8	10.1	1.3 ^{a,b}	1.9 ^{a,b}

a. SIGNIFICANTLY DIFFERENT FROM 10Mg OF MORPHINE AT .05 LEVEL.

b. SIGNIFICANTLY DIFFERENT FROM 30Mg OF MORPHINE AT .05 LEVEL.

FIGURE 2. Effects of chronically administered cyclazocine on morphine-induced changes. In this study, the values presented represent responses and changes seen in 6 subjects.

Cyclazocine was administered orally in a dose level of either 2 mg/70 kg or 2 mg b.i.d. These data are from a paper by Martin et al.¹

at this dose level for 9 days and then abruptly withdrawn. Figure 3 compares the abstinence syndrome that emerged following this addiction cycle with a somewhat milder addiction schedule in 8 unprotected subjects. As can be seen, there was marked attenuation of the intensity of abstinence in patients protected by cyclazocine. Thus, it is quite clear that chronic administration of cyclazocine will almost completely antagonize the subjective effects of doses of narcotics that addicts can reasonably be expected to obtain "on the street," and further, almost completely prevent the development of physical dependence. In addition, if cyclazocine is taken chronically it would be almost impossible for an addict to kill himself with an overdose. In subjects who have received

cyclazocine chronically, 60 mg of heroin intravenously produces a level of intoxication that is smaller in magnitude than that seen with 30 mg of morphine administered subcutaneously in unprotected subjects.

Thus, with the use of the narcotic antagonists it is possible, as it were, to immunize patients against the effects of narcotics. This may have several advantages. (1) If an ambulatory abstinent addict who is protected with cyclazocine for one reason or another becomes involved in drug-seeking activity, perhaps in response to an unpleasant and stressful environmental circumstance, he would not have to prolong his spree because physical dependence had developed. (2) It is possible that subjects on cyclazocine who experiment with narcotics may actually, as a consequence of

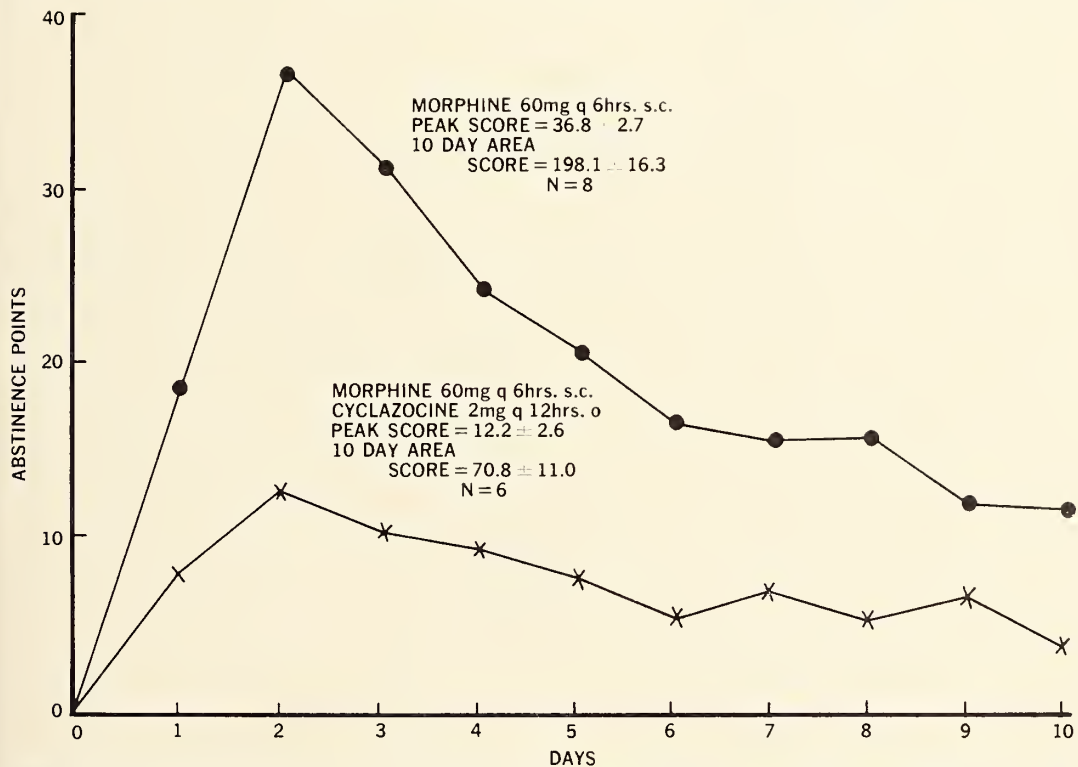


FIGURE 3. The time-action course of abstinence in patients addicted to morphine. Values for the control group (closed circles) were taken from a study by Fraser et al.¹ The crosses represent the mean abstinence scores obtained in 6 patients who had been

stabilized on cyclazocine throughout the addiction cycle and period of withdrawal. Figures represent mean values \pm standard errors. These data are from a paper by Martin et al.⁴

their experimentation, extinguish conditioned abstinence and conditioned drug-seeking behavior. (3) If protracted abstinence is a slowly reversible phenomenon, then it may be possible to prevent subjects from reestablishing dependence during the time that protracted abstinence is decreasing to an insignificant level.

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Narcotic addict rehabilitation

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IF THE ADAGE, "once an addict, always an addict" were true, rehabilitation of the narcotic addict and salvage from hopelessness would not be possible. That this is very far from true is being proven at the California Rehabilitation Center.

The California Legislature in September of 1961, recognizing its obligation to deal with the growing problem of narcotic addiction in the State, provided for a program of civil commitment for treatment of the addict. It thus created the California Rehabilitation Center located at Corona and further provided for an out-patient after-care program that included reduced case loads, chemical testing and authorization for halfway houses. In its awareness of the complexity of the problems of addiction it also provided a mandate for research into the rehabilitation of narcotic addicts.

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The rehabilitative process goes into operation the day a man or woman addict arrives at the California Rehabilitation Center in Corona after appearance before a superior court judge who has committed him to the jurisdiction of the Department of Corrections for a definite period after virtually the same proceedings as those employed for the commitment of the mentally ill. The addict is immediately assigned to a group of 60 residents with whom he will live until he is released to out-patient status. The women are housed separately in a fenced area of the Center away from the men.

The Center is located in a beautiful hilly area of Corona which was formerly the Norconian Club until it was taken over by the Navy to serve as the Corona Naval Hospital during World War II and again during the Korean conflict. It has a capacity for housing 1900 men and 400 women. Its staff is largely composed of professional counselors who help guide the

60 man groups and who become intimately involved with their own groups.

Following physical examinations, psychological, educational and vocational testings, the group begins its work of rehabilitation by discussing the problems of every day living in an institution. Discussion of individual and group problems are carried on every day of the week for one hour by the 60 man group. Two or three times a week, the large group will break into four 15-man groups for an hour or more of intensive group work. All residents are expected to attend the daily community group which meets in an assembly room within the dormitory, with the group counselor lending professional direction to it.

In dealing with people in trouble in years past, it has been learned that an inmate can help himself if he can but get a different look at himself; if he can "see" through someone else's eye how he has been behaving and how others feel about him. The groups help make it possible for the resident inmate to first recognize and then understand the problems which have upset him in his past. The groups help make it possible for him to find new ways to solve these old problems; ways which make a person feel better about himself and keep him out of trouble with the law. The groups help make it possible for him to practice these new ways of handling problems; to "try them on for size" in a manner of speaking, before going home and "trying them on for real."

The group makes no pretense of avoiding problems or sidestepping away from problems. It tries to learn to solve problems in a manner unlike the route that led in the past to narcotics and trouble with society. Another role the group must assume is to give more responsibility to the residents for management of their own affairs. The idea is to give to the dormitory group in as many ways as possible, as much responsibility for their own activity as they can handle in a non-delinquent, socially acceptable way. Not all dormitory groups will have the same ability to handle responsibility at any given time so it is to

be expected that different dorms will have a greater or lesser amount of responsibility from time to time. The basic idea is that the kinds of feelings which have gotten a man into trouble will not be met with anger or rejection by the community ("it's not the feelings which get people into trouble, it's their behavior in response to their feelings"). Instead, the feelings are met by a treatment community which is interested in the meaning of a person's behavior and is interested in helping the person understand it. To do this, the group encourages and expects that persons will discuss both their feelings and their behavior, and work out satisfactory ways of controlling their behavior in spite of their feelings.

Some of the problem areas of the addict which must be handled by the group in its generic approach rather than by treatment geared specifically for the individual and his unique problems are:

1. Narcotic addicts tend to have a very low level of feeling of self worth or of self esteem.
2. They have a tendency toward strong feelings of inadequacy which are, in some cases, expressed in a failure-prone manner.
3. They have a tendency toward emotional dependency.
4. They have a tendency toward an extremely high potential for anxiety.
5. The addict has usually never developed any meaningful interpersonal relationships with others.
6. There is an inability to postpone immediate self-gratification.

As the therapeutic culture develops in a group and changes begin to take place within this living unit, an atmosphere of acceptance and feelings for others evolves as meaningful interpersonal relationships are developed. The residents begin to recognize that others do see them differently than they did themselves. Rules of the community group develop and are felt by individuals in terms of social control. Gradually, there is a beginning of individual incorporation of group accepted be-

havior as the resident begins to respond to his own internal expectations rather than the group social control alone. The residents assume more responsibility for themselves and for their behavior relying less on their counselors and other staff personnel to fulfill those needs which they are able to fulfill for themselves. It is to be noted that the treatment culture which is being developed is not compatible with the former delinquent peer group culture. The delinquent culture slowly withers away leaving the peer group energy strengthened for the therapeutic process.

The results of group therapy are manifest by the fact that the anxiety level of the individual remains at a level where he is not demobilized, though the atmosphere becomes less threatening and more acceptable. Greater feelings of adequacy are noted as individual contributions to the group are thoughtfully and appreciatively considered; also, the defense of responding in a failure prone manner is less needed to protect one's self from the fear of failure. The feeling of self worth is permitted to develop as inter-personal relationships are established with others, and as one begins to view himself as others see him, and not so much as he fears he is. As the sense of self worth is built up it permits gradual recognition of dependency needs without becoming overly anxious.

At the California Rehabilitation Center it is recognized that the rehabilitation process must include more than the alchemy worked by the therapeutic community. The resident also receives in his course of staff-guided self-help, work therapy where he can learn such trades as upholstery, laundry, dry cleaning, baking, general shop, building maintenance, landscape gardening, house painting, cooking, hospital aide, and several others. There is also the required work on regular projects as they are needed throughout the institution. Many of the residents at the Center have never had the experience of securing and keeping adequate jobs in the community. The work habits they can learn here are considered of primary importance in

making a successful out-patient adjustment in the community. Staff instructors are here to teach in the work program as well as in the academic instruction program.

Academic instruction is of vital importance in the modern day employment field where the complexity of tasks is becoming greater with advances in industry and in all other fields. Residents are encouraged and given the opportunity to receive instruction in an elementary or high school curriculum as the need may be. This is borne out by the fact that over fifty percent of the resident population measures below the 8th grade level and only thirty-one percent have a grade placement of 9.5 or better.

In addition to a work program and an academic instruction program, there is also a physical fitness program which is supervised by a director of physical education who works in close cooperation with the medical department, adjusting the exercise program for those physically handicapped, and in general supervising the athletic programs of the physically fit. Residents are successfully taught the need and value of physical fitness which for most of them is a completely new concept. It is amazing to see at first hand, the interest in athletics and physical development assumed by a group who were never previously concerned with the care of their bodies; even quite oppositely, concerned only with the gradual destruction of their bodies.

The need to profitably and pleasurably make use of one's leisure time is held to be another important ingredient in the rehabilitation regime. When one has lived his life without a plan and without a charted course for accomplishment, it is reasonable to believe that thought was certainly never given to make constructive use of leisure time. By stimulating an interest in music, the arts, crafts, public speaking and other forms of self-expression during off-duty hours, the resident is led toward the appreciation and value of a well-rounded life. A recent art exhibit held in the huge main dining room of the former Noreonian Club and the former

Naval Hospital's Staff Dining Hall disclosed a wealth of potential artistic talent among all the various ethnic groups of residents. In the case of most of the artists represented, they had never taken part in such endeavors before coming to the Center.

Because it is recognized that many addicts have family difficulty and face the possibility of family condemnation, family criticism and family suspicion when they return to the community, residents are encouraged to have their families visit them and are encouraged to become involved in group counseling sessions with family members and staff. Such family counseling groups meet regularly one evening a week with husbands and wives discussing their problems past, present and future in the presence of a counselor from the women's section and one from the men's. The result of this type of additional group counseling is hinted at by the fact that among 84 such residents who have had 43 of their number on out-patient status, 51% were living in the community for 6 months or longer without return to in-patient status and 12% were in the community 11 months or longer without return. Only one of the 43 has violated and been returned. The balance of 41 residents in the family counseling have not yet been released or have been transferred elsewhere.

The Center's religious program involves contact on the part of the resident with full time or part time clergymen of the Protestant, Catholic and Jewish faiths. For many of the residents this provides an entirely new experience; for some it is one which was nearly entirely forgotten during the years of drug use.

Although the foregoing description of the in-patient rehabilitative phase ends upon the resident's release to the out-patient rehabilitative phase upon the action of the Narcotic Addict Evaluation Authority, it must be borne in mind that preparations for the out-patient phase of the process are really begun shortly after his initial entrance to the Center. At this early

date the field (community) staff becomes involved with the resident. The case worker or field agent contributes an extensive review of the resident's home environment, family feelings and attitudes, work record and prospects to the case history while the initial summary is being compiled.

When the institution staff feels the resident will soon be ready for referral to the Board for probable release to out-patient status the case worker to whom he will be assigned in the field contacts him and together they work out release plans and together they build a constructive relationship.

The field agent is specially trained to work with his case load of 30 addicts. This out-patient group of 30 meets once each week in the community as a counseling group. In addition, the case worker meets individually with each releasee weekly at his home or at his job. Out-patients are tested for drug use five times a month for the first six months on release. Four of these naline tests are given on a regular basis and the fifth is a surprise test. After the first six months of good results the testing program may be reduced to two surprise tests a month. Recently, urinalysis has been added to the testing procedure and research has been continuing in the best possible methods to determine early detection of re-use. Evidence of re-use results in return to in-patient status at the Center. Some out-patients are returned to the Center not because they started using narcotics again, but rather because they started drinking heavily or because they failed to maintain adequate employment or violated some other condition of their release. Evidence of some delinquent behavior is recognized as a danger sign of relapse in the rehabilitative process and the releasee is returned to the Center. *A man's return to the Center is not necessarily evidence of failure.* A tuberculous patient released from a sanitarium to out-patient status is watched for evidences of relapse and is accordingly returned for in-patient treatment when it is detected.

Some of those who returned to the Cen-

ter had originally gone out convinced they "had it made." They encountered unexpected problems and reverted to narcotics use. On return, instead of the bitterness and blaming of others that might have been expected, counselors found an attitude of new appreciation of their problems and a new determination to lick them.

Realizing that some of the releasees could not quite make it on their own during the first few traumatic weeks of out-patient status, the halfway house program was provided for. The first halfway house in the program was opened in May 1965 and was established to care for 50 men during the gap between adjusted institutional living and the full freedom of the community. In August of 1965 another halfway house to care for 25 women was established. Since the woman addict generally does not have the supportive family constellation to which to return, this is seen as a most valuable addition to the rehabilitation process. Both of these are located in Los Angeles, the men's in the downtown area of the city and the women's in Hollywood.

At the two halfway houses, the out-patient is allowed to remain no longer than 60-90 days. He or she may be directed to leave the house if it is apparent that a dependency feeling is building up or if there is a lack of responsible behavior. Although structuring of the addict is considered important, every effort is made to show him that when he demonstrates responsible behavior as a member of the community, adherence to the more rigid rules of curfew etc., may be eased in keeping with his continued responsible behavior.

If help is required in obtaining employment, such assistance is offered by the case worker in cooperation with governmental and private employment agencies. After work is obtained, the releasee is given every encouragement to continue his employment. When able to, the releasee at the halfway house is expected to pay for his room and board and to maintain the cleanliness of his own quarters and his own person. At the halfway house, the

group meets twice a week during evening hours and here again, the therapeutic climate of the group is continued through frank discussions of feelings, behavior and problems of general or individual nature. As at the Center during in-patient therapy, the group is closely involved with its counselors who are well trained and experienced persons in this work.

If a releasee on out-patient status feels that he or she is encountering problems that are apt to lead again to the use of narcotics, they are free to request admission to the halfway house, where they may have the help of the closely knit group. If it is evident that a releasee is in danger of returning to the use of narcotics while out in the community or in the halfway house, his out-patient status may be terminated and he is returned to in-patient care at the Center in Corona.

What results have we thus far obtained to indicate that this rather complex rehabilitative process is working?

Since the beginning of the program in September 1961, there have been over 5300 men and women committed. As of December 1, 1965, there were 1672 men and 268 women in the Center. By December 31, 1965, 2578 men and 665 women had been released to out-patient status, 1,111 men and 263 women have been returned to the Center for additional treatment. It is quite significant that of those men returned only 10% were convicted of a new charge, while 90% were returned on the original commitment. With respect to the women, only 4.4% were returned with new charges. While it is too early to make any predictions based upon these small numbers the results are encouraging when it is recognized that some women who had been released in the fall of 1962 have completed three drug-free years in the community and were thus released from the program entirely. A listing is at hand of 148 names of individuals who have been out 18 months or longer.

We do have preliminary studies on those released from the California Rehabilitation Center on out-patient status and although

they do involve only a small number to report major findings, some preliminary facts are available.

A report on the first releases during 1962 and covering one year of experience in the community, a total of 108 addicts (52 men and 56 women) indicates that only two men had been convicted of a felony offense and 14 men and 2 women of misdemeanor offenses; and that *35% of the men and 36% of the women remained in the community with no evidence of drug use*. That of the group returned to the California Rehabilitation Center at Corona, for further in-patient care, a little less than one half of them were charged with opiate use and the remaining returnees were split fifty-fifty between no drug use and use of marijuana and dangerous drugs.

It bears repeating to say that we must learn to recognize that a return to the Center for an additional period of time, perhaps once, twice or more should not be looked upon as failure. We must continue to offer the addict intensive, probing programs of counseling, psychotherapy and ancillary programs of the rehabilitative process. These programs *do not* and certainly *should not* stop when he leaves the Center. We must continue to supervise, help, even control the addict in the community; we must provide enough aid to bolster him over periods when society again, as it will, appears about to overwhelm him. When the addict does falter and begins the re-use of narcotics, he must be promptly returned for further intensive care aimed at making for him another opportunity for successful living back in the community.

Rehabilitation should be carried on with

intensive research into the nature of addiction. This research must of necessity be of broad scope and encompass the medical, physiological, psychiatric, psychological and sociological aspects of narcotic addiction. It should be carried on intensively with the full support of the National Institutes of Health, of our great universities, of our large research foundations as well as of our state governmental agencies.

Conclusion

Rehabilitation of the narcotic addict at the California Rehabilitation Center based on civil commitment to an intensive program of in-patient treatment preliminary to a closely supervised follow-up is being carried on with encouraging results.

Reports indicating that 35% of treated addicts are living in the community free of drug use and successfully remaining out of trouble with the law have been presented. The effectiveness of the therapeutic community group as a modality of treatment supported by academic education, vocational training, physical fitness instruction, and good medical care plus religious teaching and learning how to profitably and pleasurably make use of one's leisure time is recognized for its full worth in the rehabilitative process.

Intensive research into the complex nature of drug addiction and the rehabilitative treatment should be carried on with the strong support of governmental and private agencies. Addiction rehabilitation is far from being hopeless; rather it is a problem that should call forth the best in society to truly understand it and intelligently use it.



Aftercare of drug addicts: the missing link in rehabilitation

FATHER DANIEL EGAN, S.A./Nova Scotia

Why the Concern?

ALL THAT IS GOOD and worthwhile in human society stems from our acceptance of the basic reality of man's inherent dignity as a human person. Once a culture denies or forgets this fact, then society suffers. We begin to wrongly believe that man's value and dignity comes from society or the state, and not from God. What society gives, society can take away. What God gives, only God can take away. Society may forget man's dignity, but God can't.

Man has a physical body like a brute animal, and like a brute animal he has blood and emotions and urges and all that. But man is more. He is a rational animal. He can think and reflect and read papers at a conference on addiction. He doesn't have to act by instinct or chance or blind force. Man has free will. He can be blamed and rewarded.

Man's Dignity

It is only because man has a spiritual and immortal soul that all this is so. And it is only because man is a human person with such noble dignity and destiny inherent in his soul that we are compelled to rehabilitate persons who have become drug addicts. When any profession forgets or ignores man's dignity and eternal destiny,

then man becomes a mere object of research, a *thing* to be talked about, a *topic* of verbal dissection.

The addicted person will always be more important than addiction. We don't research the effect of "goof balls" on the brain, but rather the effect of "good balls" on an organ of the central nervous system through which the human person thinks. We don't research methadone, but how methadone can help some human persons live normally in society in keeping with their dignity as people of God. All this is basic to the whole concept and philosophy of any rehabilitation program for drug addicts.

Rehabilitate What?

The ultimate aim of all research, treatment and aftercare is rehabilitation. But without getting into semantics, "rehabilitation" may not be the best word to use because we really don't or can't "rehabilitate" most drug addicts. The Latin word "rehabilitare" means "to restore," "to give back what one lost," "to regain a former condition." Now, you can't restore what one never had. If most drug addicts started on drugs at fifteen, then it means they never finished school, they never held or were prepared to hold a permanent job. It means that from the tender age of fifteen they descended into a sub-culture of society, so unstable and rootless that we find very little to regain, restore, or re-

Retreat House, Gardner Mines, Nova Scotia.

build. Once addicted, all their waking hours are spent in search of drugs, or the money to buy them. When not doing this, they're in a prison, a hospital, or morgue. What, then, is there to restore, or rehabilitate? When ten years of one's life are oriented towards nothing but heroin, remove the heroin and what fills the void? Rehabilitate what?

Rebirth and Growth

Rehabilitation, then, is a long, sustained, frustrating process of rebirth, re-education, and growth. Often, the only thing we have to begin with is the human spirit. The will to live; the will to find happiness instead of passing pleasure; the will to live without guilt; the will to start the day with coffee and a prayer instead of a "fix" and a curse—these are spiritual motivations that rise up from man's soul—his will—and not from stimuli or brain waves. This has been the most exciting thing to watch at Synanon, Daytop, The Village Haven, or those on the New York City methadone program, People doing and enjoying "square" things they never did before. People beginning to live and grow. A methadone girl going to her first dance in seven years. A Daytop boy ironing a shirt for the first time in his life. A Village Haven girl baking her first pie. A Synanon Graduate starting a new foundation. Only those who know addicts feel like cheering at such miracles.

The Missing Link

The chain of rehabilitation is only as strong as its weakest link. If there's a link missing, there's no chain. It is my contention that up to recent years there has been little or no rehabilitation of drug addicts, because the link of aftercare has been either totally or virtually missing. In the past few years, aftercare programs have begun to develop, but they are almost completely inadequate. I don't mean that the programs themselves are lacking in dedication or know-how. I mean they can't cope with all the people begging their services.

What good is research if it isn't aimed at treatment? And what good is treatment

if it isn't followed up with immediate, intelligent aftercare? Up to now, untold millions of dollars have been spent (some would say wasted!) on research and treatment in the field of drug addiction, and all for what? Supposedly, it was all aimed at curing or rehabilitating the addict, but has it? Research has led to better treatment of addicts in our drug hospitals, but the link between treatment and rehabilitation has been missing. There is virtually no adequate aftercare of drug addicts leaving prisons or hospitals.

Care, Not Treatment

As a side remark, may I say that I don't like the word "treatment." It seems too impersonal. If "care" and "cure" are almost synonymous terms in medical practice, then care is equally essential in the rehabilitation of drug addicts. But no one can really give rehabilitating medical care unless he really *cares*. "Care," then, is more of an attitude than a treatment. We treat an abscess, but we care for the addict *with* an abscess. A doctor may lance a painful primary abscess in an addict's arm with precise medical surgery. But if while treating the abscess, the tone of his voice and the look in his face reveals his open disgust for addicts, then his treatment will have no lasting motivating effect on the long range goal of rehabilitation.

Experience Teaches

In trying to rehabilitate addicts over the years, I have made many mistakes. But I had to learn from mistakes, and not from human lives. So I had to learn fast. It was in the course of this learning process, living with addicts day and night, that I was forced to make basic conclusions about pathetically useless and expensive methods of dealing with drug addicts that only perpetuated the problem instead of solving it. When one studies the problem of addiction many miles from its source, there is seldom a note of urgency in seeking its solution. One becomes a bit too objective, too professional. It is only when one lives with people who are addicts, gets involved in their tragic lives, that time is important,

and the same mistakes can't be repeated and repeated.

Every year more than 1400 women are admitted as prisoners to our Women's House of Detention in New York City. At least 85 per cent of these are drug addicts. So in 15 years I've met thousands of female addicts. In my early days I used to actually pray that some would be arrested. "At least in prison they'd be safe." After identifying so many addicts in the city morgue; seeing so many in hospitals after they were beaten, stabbed, raped; meeting them sick in the streets at night existing on nothing but coffee, cigarettes and "junk," I was relieved, and still am, when I met them next day in prison. "At least here she will be rehabilitated; here she will get some psychotherapy. Here she'll be helped." But now I know that prison of itself permanently helps no one. It doesn't permanently help society either. Whatever help it gives the addicts is lost the day of release, because there's no adequate aftercare to pick up and continue the help. As for psychiatric help, I believe it's the exception rather than the rule, that an inmate gets any personal, individual psychiatric care unless it is aimed at coping with some institutional tension or disciplinary problem within the prison walls. In the few cases where real psychotherapy is given, it is usually wasted because after release there's no contact with the same psychiatrist in the community. In a word, adequate aftercare is missing.

The Hospital

There was a time, too, when I was convinced that the hospital was the answer. Fifteen years ago, when I met my first drug addict and was shocked to discover that no hospital would admit her, I was determined that hospital beds was the answer. So I pressured and lobbied to get them in hospitals. Bit by bit, or bed by bed, I was able through blarney, flattery, adulation, cajolery and a few threats to get more and more addicts into public hospital wards. In most cases, once they saw what an addict looked like and saw how well they responded to genuine medical concern, doc-

tors were more than kind and sympathetic with addict patients. But then what? All those hours of dedicated and expensive medical care went right down the drain almost the very day of discharge from the hospital. Why? Because there was no adequate aftercare in the community to pick up and continue the care.

Today I am firm in my convictions that the hospital is not the answer. It may be part of the answer, but not even a necessary part. If I had a few million dollars today and was told to use it to rehabilitate drug addicts, I'd skip the hospital and build myself a dream of a Halfway House that would give total patient care right in the community. Certainly, the ideal would be to have both a community hospital for quick medical detoxification and then immediate aftercare in the community. But if I could have only one or the other service, the hospital or the community aftercare, I'd rather skip the hospital and take the aftercare. With or without medical help, I'd withdraw the addict with methadone in a special section of my Halfway House, supervised by hand-picked, dedicated clean addicts. I'd then get her totally involved in an aftercare program managed by other clean, involved addicts.

More Hospitals?

This may be a very unpopular opinion in the face of the constant cries for more Detoxification Hospitals, but this conference might well go on record as at least questioning the need. I would rather propose that we use more wisely the facilities we have, but spend more money on aftercare. However, it is the sacred and serious responsibility of the medical profession and all other professions and disciplines concerned with drug addiction in Illinois, and especially in metropolitan Chicago, to realistically evaluate their own situation and determine if there are enough hospital beds available for those who are properly motivated to want hospital care. Here in Chicago, after three days of studying the scene, I'm sure you need more beds. But I have my suspicions that in New York City the supply of beds may be equal to

the legitimate demand. By that I mean there aren't *that* many addicts who really want to stop addiction to warrant building more hospitals. Prison-like in their rate of recidivism, detoxification hospitals in New York City have rapidly developed their own peculiar brand of revolving doors that swing addicts in and out for reasons which should be obvious by now.

Why the Failure?

Those working for many years in the field of drug addiction can see many reasons why detoxification hospitals alone are not the answer. From my total look at the picture, I wouldn't blame the hospital at all. It is doing only what it was set up to do, namely, detoxify the addict. But detoxification, at least today, is the easiest and cheapest step in rehabilitation. It doesn't take two weeks to withdraw an addict from today's "junk." But once withdrawn, then what? If an addict is not properly motivated before admission, he will very probably be back on drugs within a few hours after discharge. Even if he admitted himself for the right motive, he will still be re-addicted just as quickly if there is no immediate, adequate program of total aftercare as *soon* as he leaves.

Where Does Aftercare Begin?

Medical doctors know from training and experience in obstetrics that successful childbirth depends on pre-natal care. Good surgeons are often very reluctant to operate on a patient who is convinced beforehand that he will not survive the operation. Medical men should apply the same wisdom and common sense to the sickness of drug addiction. If there is no conditioning or preparation beforehand, then the results may be successful only in spite of you—not because of you. An addict's attitudes, his motivation, his hopes and plans, his guilt—all this must be cared for *before* admission. If the addict is hopelessly convinced that he is doomed to return to drugs even *before* he enters the hospital, then he is doomed to be re-addicted. But, in a new and daring approach, why couldn't we begin our aftercare even before he enters the hospital?

Who's to Blame?

To all who are sickened by the unending double vision of seeing the same addicts revolving in and out of the same hospitals and prisons, it must be painfully obvious by now that something must be wrong in *what* we're doing or in the *way* we're doing it. As someone once said in desperation, "Never were *so* many people *so* wrong for *so* long about *so* many things . . ." We can't pass it off by blaming it all on the addict. Neither can we continue to blame poor Mr. Anslinger, or the present attitudes of the Federal Bureau of Narcotics. I'm convinced that our whole approach has been wrong. So wrong in its philosophy and mechanics that we have unknowingly perpetuated the problem. And it is a mystery to me that so many intelligent and dedicated people have kept in motion a program of rehabilitating addicts which has proven to be so hopeless, so futile, so discouraging and so expensive.

In a word, the method is wrong. It is wrong in the *way* it begins and in the *way* it ends. It ends when it should be beginning, and it begins on a futile note of despair. Aftercare depends on the *way* an addict enters a hospital and on the *way* he leaves it.

The Wrong Philosophy

In accordance with man's nature and dignity, as a thinking creature, rational psychology teaches that the interior order of intention must precede the exterior order of action. "Agitur sequitur esse." Motivation comes before execution. If an addict's interior order of motivation is all wrong, then the external execution is all wrong. This is simple but sound philosophy. And without a true philosophy of man, every related discipline is plain stupidity and a waste of time.

Reducing this to the problem of drug addiction, let's face it! If a man can't function without drugs, then it's an expensive waste of time to detoxify him. It perpetuates the problem and keeps that revolving door swinging. All of us must work together, then, to isolate those who

really can't, from those who only *think* they can't. If all the earing professions decide that some few addicted persons cannot function in society without drugs, then why not give it to them, and call it medication, which it really is. Why force them to live as criminals, to be continually arrested, convicted, imprisoned, released and re-addicted, and then die as criminals?

I was interrupted at this point by a tragic incident that providentially spells out my argument.

Methadone or Death

Back in July, two female addicts were simultaneously released from our Women's House of Detention. Lillian had just served her seventh sentence, Rose her 117th! Lillian was suffering from such severe depression and anxiety that even I could see she really needed some form of drugs to get through the day. But there was no aftercare for Lillian. She almost wept on the corner as she said, "Father, I can't promise you I won't 'cop' in an hour. I know I will. I need it." She did need something! If I had had a handful of methadone pills in my pocket at the time, I would have given her some on the spot. Not having any, I begged her to go up to Manhattan General Hospital and try to get on Dr. Nyswander's program. Now the tragic interruption. I just returned from Bellevue Hospital after identifying Lillian's body. She was in the morgue five days. No one would claim her. She died of tetanus. An awful way for a human person to die. Painful spasms, rigid body. All from a dirty needle in an open sore. Poor Lillian never made the methadone program. If she had, she might be alive today and, perhaps, functioning to the limits of her capabilities.

One Hundred and Seventeen Sentences!

Rose's story is more hopeful. It's better than a fifty-page paper on aftercare. During all those 117 sentences, she never *wanted* to stop drug addiction because she was convinced she *couldn't*. But she always added in despair: "Even if I wanted to stop, *how* could I? Where would I be-

gin? Who'd help me?" On her 117th release from prison I convinced her, on the corner of 6th Avenue and 10th Street, that she really could stop if she *wanted* to, and then gave her her own reasons for wanting to stop.

"But where will I go? Where will I live? What'll I do? Who'll help me?" Such questions never frighten a non-addict but they do panic an addict leaving a hospital or prison. Real aftercare answers all those questions. No aftercare is usually the excuse for returning to drugs. When I convinced Rose that I would help her, that she could have a private room of her own at Our Village Haven Half-way House, where all her needs would be taken care of, where she wouldn't be alone and lonely, where she could get hope and encouragement and identity from other clean addicts—when I explained all this to Rose, it was like as if a great weight was lifted from her whole person. I brought Rose to the Village Haven, and she's still there. The longest six months free of drugs in over twenty years.

There is no one kind of aftercare that works best for every addict in just the same way. The kind of aftercare Rose needed was never there when she stepped out of prison her previous 116 times. The kind of aftercare poor Lillian needed she couldn't get.

I suggested earlier that our whole philosophy of rehabilitation was wrong in that too little effort was spent in properly motivating addicts *before* detoxification and that the mechanics were wrong in ending rehabilitation before it had even begun.

Preparation for Life

Let me stress the last first. In too many prisons and hospitals, addicts do nothing more than vegetate. At Synanon or Daytop they grow mentally, spiritually and emotionally. The rehabilitation programs they do have in most prisons and hospitals are aimed merely at keeping addicts busy, because inactivity leads to many fights and drug talk. But as far as actually helping the addicted person to prepare for life in the community, this just isn't done in most

cases. The vast majority of addicts don't know, on the day of discharge, where they will *live* and how they will get their next *meal*! Actually, rehabilitation only begins with discharge, because only then is the addict returning to a real world. But if there is no immediate, adequate aftercare, how can there be rehabilitation? We seem to forget that not even personality can be understood apart from its social setting. How can psychiatry pin a label on an addicted person miles away from the addict's own social setting? Personality can have no meaning when studied apart from a true-to-life community of other persons.

Those in charge of any in-treatment program for addicts, be it in a hospital or prison, must begin to think less of the addict in the process of detoxification, and more in simple terms of his living and eating and working and shopping *in* the community. To be even more practical, where will he sleep tonight? How will he support himself tomorrow? Rehabilitation really begins with immediate aftercare, not with detoxification or ceramics. Rehabilitation *could* begin in a prison or hospital. But in most cases it does not. It ends even before it begins.

Utilization of Clean Addicts

Because no one understands an addict like an addict understands an addict, an addict is the best person in all the world to really help another addict. Maybe the simple repetition of the word "addict" will force us to remember him. You will learn more about addiction and you will be taking the biggest step in licking the problem the day you do see and hear a group of New York City "Daytop" graduates discussing rehabilitation. They are living proof of their total understanding of the problem and the lasting help addicts can give each other.

There just isn't any sense giving aftercare to those who don't want it. Those who don't want aftercare want only to return to drugs. So we must somehow separate the men from the boys. The right addicts, free from drugs, living "square" in conventional society, are the best people to

contact other addicts and motivate them to a new drug-free way of life. Those on a methadone program, using the program and not abusing it, are the best salesmen for its new, non-criminal and more productive way of living. Not to harness the zeal, experience, understanding and dedication of these people is almost criminal.

The aftercare they are not encouraged to give is what's missing in all rehabilitation programs up to now. So let's beg their help.

Now, before spelling out any specific forms of aftercare, may I stress again that aftercare is more of an attitude than a place or a program. Unless we develop the habitual mental conviction that aftercare is an absolute and urgent necessity, then there just won't *be* any. Up to now, we have not been convinced of this urgent and absolute necessity. That's why there hasn't been any—at least in proportion to all the time and money spent in pharmacology, pathology, physiology, epidemiology, phenomenology, and some of the other sciences I can't even pronounce. Up to now, all or most of this has been wasted because it was done in a vacuum. Hence the failure of most traditional approaches in the field of rehabilitating addicts. Convincing the various disciplines, professions, and social sciences of the *need* of aftercare seems more important than merely describing *kinds* of aftercare.

Recommendations for Aftercare

There comes a point in an addict's life beyond which aftercare is both useless and impossible. Such a point is the prison sentence which ceases to be remedial and becomes vindictive. The addict who leaves prison poisoned with the pus of hatred and bitterness can't be helped with an aftercare program, no matter how good or expensive it is. The only cure for such poison is heroin. Last summer while living at a large federal prison, I sat and talked with two women inmates. One was there because she had planned to blow up the Statue of Liberty and was caught with more than enough dynamite to do it. The other was caught with not *enough* heroin

to fit in the eye of a needle. The one with the explosives was out in five months; the addict still has four years to go.

Parole for Addicts

The topic of mandatory, excessive prison sentences for sick addicts has everything to do with aftercare. Aftercare is useless when someone is too bitter to want it! Why must we say to a judge: "Look, Your Honor, you're intelligent and experienced enough to impose fitting sentences for every crime but addiction." If he can fit the punishment to the person in other crimes, why not crimes of a sick addict? The sick addict, sentenced to five or more years in prison with little or no chance of parole is seldom rehabilitated. If she knew that with effort on her part she could be eligible for parole in a year, then she would more probably and more easily cooperate with in-prison rehabilitation programs. She wouldn't leave bitter and resentful against a vindictive society which punishes her with more barbaric cruelty than any other criminal on the books.

So let's do some other kind of research. Let's put fifty addicts in a special prison, give them short sentences, and long paroles, plan immediate intelligent aftercare and then see how many return to drugs.

Let's research the effectiveness of letting the addict's sentence be determined on the basis of consultation with those entrusted with the responsibility of caring for and rehabilitating the addict. Who knows best when a sentence ceases to be remedial and becomes vindictive—the prison staff or the legislators in Washington? In other forms of compulsory treatment or psychiatric care, it is the staff that decides on the length of the sentence. Why not, at least, research the same approach with fifty addicts?

Department of Aftercare

From the time an addict is arrested, until the day of his discharge from Lexington, he may come in contact with as many as a dozen different departments all the way from the Police Department to the Department of Health. But there is no one de-

partment charged with the total responsibility of his aftercare. When he steps on that night train heading for New York City or Chicago, there is no department to pick up and continue whatever good was done in the hospital. I propose that every big city with a drug addiction problem create a special Department of Addict-Aftercare. A similar department would be set up in every big prison and drug hospital. Contact would be made between the two departments at least one month before an addict's release. During that time some realistic aftercare plans would have to be worked up before release. This is always one of the most frustrating experiences of my priesthood—riding up to New York City on the train from Lexington, Kentucky, with a half dozen addicts. They have just received the best medical care in the world from the best doctors. After eating and sleeping well for almost three years, they step on that train looking like executives. But, of course, they don't feel that way. They know when they get off that train at Penn Station, there's nothing to begin with—no home—no job—no money—no good friends—nothing! On my last trip up, two of the addicts were high before they reached Washington. I guess they just couldn't face it. Imagine! Almost \$20.00 a day for three years, all wasted because there was no department in Lexington charged with the serious responsibility of working conscientiously with a similar department in New York City, to plan immediate aftercare.

Perhaps this would be easier if every voluntary or sentenced addict leaving Lexington were at least placed on a compulsory mandatory three-month parole. Parole people show some interest in what happens after. They have to. It's their job. Why not give other people the job of planning and supervising aftercare for the unfortunate drug addict, who can't make parole? Why release these *with* nothing and *to* nothing? Perhaps all this seems too simple and obvious to deserve any serious attention. But to those of us working with addicts in the community, it is the most im-

portant single need in the whole field of rehabilitation.

The Limits of Psychiatry and Medicine

One of the memorable side-remarks of the late President Kennedy to those of us participating in the last White House Conference on Drug Addiction was something to the effect that "a sense of humility is needed to win this war against drug abuse. No discipline or profession has all the answers." I can count on the fingers of my one hand the number of times a psychiatrist has picked up a phone and called me for aftercare help before he discharged an addict back into the community. Medical doctors have done it more often, but not enough.

If the causes of addiction are deep in the roots of the community, then total patient care demands that no doctor or psychiatrist discharge a detoxified addict from a hospital or prison without first inquiring: "Where will you live tonight? How will you support yourself? To say, "This is not our responsibility" is like twenty-five people standing by and watching a girl being stabbed to death and doing nothing about it. It is certainly someone's responsibility. Why *not* yours? When I see that medical and/or psychiatric help is needed to help an addict, I am humble and practical enough to beg it. Medicine and psychiatry should be humble enough to admit their limitations and then care enough to feel compelled to reach out into the community to seek and demand the aftercare that is needed. The times have been very rare when a prison or hospital doctor or psychiatrist has had the humility and the common sense to call me and say: "Father Egan, we're discharging a woman who will go right back to drugs unless someone helps her with a place to live and a job, and some supportive help in the community." Whenever the calls did come, the needs were met. It is because medicine and psychiatry have not demanded adequate aftercare that rehabilitation is such a failure. You are now the most powerful and influential force in this field, not the Federal Bureau of Narcotics. You usually get what

you demand. I challenge you to demand immediate intelligent, adequate aftercare facilities for the addicts you want to treat or research. Then see how quickly Federal, state, and city funds will be provided!

The Village Haven

Every big city needs many different types of aftercare facilities. The Village Haven is only one particular type of care. It grew out of a sense of urgent desperation. A high percentage of female addicts have no place to live after hospital or prison release. In recent years it has become easier for addicts to get on welfare (easier than it used to be, not easier than non-addicts), but only the poorest apartments in the poorest areas could be rented on a welfare check. These were usually drug areas. So that wasn't the answer. Of course, a better apartment in a better area would help, but that kind of rent demanded prostitution, and to prostitute many addicts must first drug their conscience (not bodily feelings) with heroin. So the rat race began again. For the female addict who tried to make it without welfare or prostitution, it was an easy matter to buy her a legitimate job from a legitimate employment agency and then give her enough hotel rent until pay day. But somehow, very few seemed to reach pay day. Loneliness is a cause of addiction. To return each night to a lonely apartment and just look at four walls was an excuse to return to drugs. Furthermore, the drug addict with a record, living alone, can easily be arrested. And she is presumed guilty until proven innocent. But how can *she* prove she's innocent? She can't! Just look at . . . her appearance . . . her record . . . and so "The Haven" grew out of an urgent necessity.

The Village Haven is a four story brick building in Lower Manhattan. In addition to thirty-six bedrooms, it has a large living room, dining room and kitchen, a medical clinic, and crafts and classrooms. Any female addict may live at the Village Haven, right out of prison or a hospital, so long as she is free of drugs, willing to live by the rules of the house, and presents no

problem of physical fighting or overt sexual aggressiveness. Because it is in the heart of New York City and not a prison, it runs the risk of any program that tries to help weak human beings in the community. It is 99% drug free, which can't be said of some prisons. Its rehabilitation success rate is higher than any prison. Over 60% of all girls who have lived at The Haven for at least two weeks are now drug free. Its program has been in operation for only a little more than a year and a half. So, understandably, its directors and staff are not yet satisfied with its dynamics. We are in the process of learning. But the New York City Department of Mental Hygiene has been so encouraged by what they have seen that our Village Haven Half-way House for female addicts has recently received a grant of \$90,000 to better structure its program. Nine rooms on the top floor, next to the clinic, are presently occupied by pregnant addicts in an attempt to research the best way to help the addict mother and her addicted baby.

Half-way Houses

More such Half-way Houses are desperately needed in every big city. The cost to taxpayers of keeping an addict at a Half-way House is less than half the cost of prison and a quarter of the cost of a hospital; yet it could do fifty times more good, more quickly and more effectively. Properly structured, such houses could supply all the needs of aftercare. Since there are no absolute, reliable, scientific facts to contradict me, I would venture the opinion that 80% of all addicts leaving prisons or hospitals are neither psychotic, psychopathic, or dangerous narcotics. Neither are they as stupid as some addicts like to call each other. They are just plain "ignorant." They're certainly smart enough to support an average \$10,000 a year drug habit, but not smart enough to fit into and survive in a conventional society. They never learned how. So they are "sociopaths." Fresh out of prison, they need a place to live, food and clothing and cigarettes. They need on the spot counselling, preparation for and help in getting a job. They need

contact with "square" people to learn "square" living. All this can be provided within the four walls of the Half-way House. This is what aftercare means.

The Role of "Daytop"

Perhaps the most exciting and hopeful development in this field of rehabilitation is New York City's "Daytop." It stands a bit off center between Synanon and Lexington. Synanon has begun aggressively independent. It has been openly and proudly anti-professional. It has defied most attempts to research and evaluate its claims. But those of us who believe what we see openly cheer for the miracles daily repeated at Synanon. On the other hand, those of us who appreciate Lexington the most are understandably its most outspoken critics. Its totally conservative and rigidly traditional approach has produced many worthwhile statistics, and detoxified hundreds of thousands of addicts. What it has learned from all this is invaluable. But along comes "Daytop," draws the best from both, discards what is useless and harmful and develops its own vigorous dynamic of self-help treatment aimed at re-education and total personal growth. Staffed by ex-addicts, under a medical-psychiatric superintendent, "Daytop" has added a research design which permits evaluation and transmission of its "reality-therapy" to all who need it. Any city or group interested in developing a Half-way House for addicts could do nothing better than draw on the experience and training of a "Daytop" graduate.

Medical Assistance

Looking back over the years, I recall how many, many times two or three years of normal drug-free living could have been saved if only there had been some way of an addict's getting methadone in a legal, medical environment at the right time. Aftercare must begin with the presumption that even though it is not inevitable for an addict to return to drugs, there is some degree of probability that he might. If, as often happens, an addict is working well for two years, free of drugs, faithful at

work, supporting his wife and children and all of a sudden because of some unexplainable sudden compulsion takes his first fix in years, why must all this be lost? Often, with equal suddenness, the reality of what he is doing hits an addict only two weeks later. Then, in fright he says: "Like man! What am I doing?" By now he's taking a fix a day at five dollars a bag. He knows from experience that this can't go on; that in a few days he will need more junk and more money, and that his job can't support a "monkey" and his family. He doesn't want to lose all he gained back in two years. He really wants to kick this cheap little habit before it really hooks him. Yet he knows that he can't do it alone and keep his job. At such a moment it would save many an addict and his family if he could easily be referred to a medical clinic by an approved aftercare agency, and given small reducing doses of methadone pills to take him off his two-week habit. He could thus save himself, his job, his family, and two years of good living, on a few cents a day of legal medication. No! He doesn't want to *stay* on methadone. Just enough for a week. There are valid objections to such a clinic. So are there valid objections against every other solution to the problem. I can't think of any general-all aftercare program that wouldn't include this type of medical clinic for such an understandable and foreseeable eventuality. Up to now the other solutions have perpetuated the problem.

Psychiatric Assistance

Every big city with a drug problem has a large population of drug addicts in city prisons. If psychiatry is the answer to their problems, then why not more psychiatric care in prisons? In cases where more such care is doing good, it is tragic waste of effort not to continue that care *after* release. I propose the establishment of a specific type of out-patient psychiatric clinic located as close as possible to every city prison where addicts are incarcerated. This way the prison psychiatrists can easily continue the help started in prison. This way the relationship, confidence, trust,

which the addict developed in his psychiatrist isn't suddenly broken when it is needed most. The psychiatrists and their staff of psychiatric social workers could divide their time equally, spending half in prison and half at the clinic. All too often, when an addict is re-arrested and returns to prison, he uses the excuse that he couldn't reach the other psychiatrist he was referred to, or didn't like him. Then it's difficult to decide if this excuse is valid or not. Often in prison it is a difficult and expensive waste of time to decide who really needs and wants psychiatric help and who doesn't. Their sincerity could be tested and proven by a willingness to continue the treatment after release. How often I've brought a woman back to the prison and pleaded with her psychiatrist just to calm her for ten minutes. The patient *wanted* his help; he wanted to *give* it; but cold, impersonal, unrealistic, outmoded rules forbade it; Perhaps a ten-minute conversation with her psychiatrist at that moment might keep her off drugs for another six months. This type of out-patient clinic I recommend would have a twenty-four hour answering service with a well-oriented staff working around the clock as a team. If we can arrest or search an addict at any hour of the day or night, why not help at any hour of the day or night? Each person's needs would be met when and as they were needed, be it psychotherapy and/or tranquilizers or a temporary maintenance drug. This kind of aftercare would fill a real need. It has never been researched. It is a type of addict-aftercare that could prevent much crime, many arrests and repeated incarcerations.

Employment Assistance

Most addicts have no urgent need for psychiatric help. All they need is a job. There is, then, a desperate need for a special kind of employment agency—one geared to help addicts find work. Many addicts are unemployable. Others aren't trained to work at any specific job, but could do many jobs well. If we can afford \$25.00 a day to detoxify an addict, why not pay half that amount to get him a job? Take

drugs away from an addict and what is there to fill in the void? So he must work to survive! How many female addicts over the years have gone to great lengths describing to me "how good it is to go to bed at night, sleepy from hard work and not from a handful of pills." The good contented feeling of earning \$65 a week in a factory and not twice that amount in one night in prostitution. "But it's clean money, Father; it ain't dirty!"

The Village Haven was once a dream. Now it's a happy working reality. I have another dream these days that I pray God will soon come true. Every day many fine expert seamstresses are discharged from female prisons. They're really good at their work. They learn it from experienced teachers in prison. They practice it daily for years behind walls. When they leave, the talent leaves with them, but can't be used because having a drug record and just leaving prison is almost an insurmountable impediment to work.

If I had a grant of \$200,000, I would buy a four-story building not far from the Women's House of Detention. I would furnish the two top floors with living quarters for about twenty-five girls who had training in sewing and tailoring. I would renovate the second floor into a few large rooms equipped with all the machinery needed for these girls to cut, sew, fashion, and tailor women's clothing. On the first floor, the girls would display and sell what they produce. It would be a half-way house like no other half-way house. When a girl graduated to go out on her own, she could get a letter of recommendation from a genuine business establishment, instead of a prison. It offers so many possibilities for aftercare, the wonder is that it doesn't already exist. Services like this, however, seldom get a federal grant of money, because approval seems to depend on whether or not the service boasts of a staff of psychiatrists and research men. Unfortunately, this kind of aftercare service would only need a building, sewing machines, a few experienced sewing instructors who cared about female addicts, and frequent advice

from non-professionals in the garment industry.

Addict Assistance

The ultimate success story in every addict's life is to see him living and enjoying a conventional life, but very much involved in a community war against drug addiction. With most addicts I've known, who are clean for a good number of months, there seems to be a definite sense of compulsion to help others, or to share their new life with others. It's almost like a form of restitution. Rather than try to explain it, let's use it. In spite of the hazards, one of the most successful forms of aftercare for some addicts is to get them quickly involved in caring for other addicts. They, more than professionals, are the best people to operate two badly needed aftercare services. (1) "*Store Fronts*"—Deep in the jungles of "junk land" there are some addicts who need only the right motivation to attempt a way back to society. A clean addict is the one to give this. A clean addict is the right one to give hour by hour encouragement to another clean addict who is finding the road back long and difficult. I would urge that clean addicts staff and operate many of these beach-heads deep in city junk lands. (2) "*Round-the-clock Phone Service*"—A few weeks ago, I asked a clean addict what one kind of aftercare service was most urgently needed and that he would like to operate. He was off drugs more than five years, a graduate of Synanon in California and now one of the assistant directors of "Daytop." I waited for something elaborate and profound. Instead, he said with conviction: "I'd run a 24-hour phone service." All of us deeply involved in aftercare know the miracle of the human voice, when it expresses hope and concern and love to a soul in need. I could never begin to remember all the addicts I have kept off drugs for another day, another week, another month, just by being there when they phoned. When a clean addict loses a job, is refused welfare, or just needs reassurance or advice, there's no therapy more helpful than a phone call. Help is as close as the phone—not a fix. Yet no one

is more capable of giving better advice or understanding than one addict to another addict. This would be a relatively inexpensive aftercare service, yet its good could never be measured in dollars and cents.

Non-professional Assistance

Since all the traditional, professional approaches to rehabilitation have failed, it seems urgent that without any further waste of time or wounded pride, we take an honest, long, hard look at ourselves, and decide if the professionals alone really *have* the answer. Once the technical aspects of research have helped an addict withdraw from drugs with medical care, then what can a professional do for the addict that a non-professional can't do equally well, or maybe better? At least, in those humane aspects of aftercare that are so urgently needed in gradually integrating the addict back into the community. I include myself in this criticism because I'm as much a professional in this field as any doctor, psychiatrist, psychologist, pharmacologist, or sociologist. Drug addiction, at its root causes, is more of a spiritual problem than anything else. I'm a professional in spiritual problems. Yet time after time, when my spiritual professionalism failed to keep a person off drugs, it was a simple, happy, housewife and mother who did. Aftercare is really a person-to-person relationship, not an agency-to-addict interview. We professionals should never be so jealous of our training and status that we can't see our limitations. This war against addiction is too big for any one discipline or profession. As a non-professional said at the White House Conference: "There are too many Chiefs and not enough Indians." We have failed to rehabilitate because we haven't sought and encouraged the assistance of dedicated people in the community. All they need is a little wise direction and the conviction that we need and appreciate their help. Let's be humble enough to admit our failures and ask their help.

Spiritual Assistance

This comes last, not because it is least important, but only because man's spiritual end gives meaning and purpose to all else.

Good psychiatry begins with the problem of how a particular addict can live his life most happily in a community. So psychiatry runs head on into two concepts that can't be properly understood without theology: the meaning of life and the meaning of happiness. Where psychiatry ends, religion begins. Any observant psychiatrist in the field of drug addiction runs into daily conflict with that awful word "guilt." He may coin another word for it, but it's still there. He may remove the neurotic guilt, but not the real. And no amount of tranquilizers, shock therapy or psychotherapy will take away sins against God. The State may pardon, but only God can forgive. Addiction and guilt; addiction and aimless living; addiction and pleasure seeking; addiction and life without God: — these terms are so synonymous, it is surprising that theology has been kept out of this field for so long.

When has the National Institute of Mental Health ever demanded as a condition for a grant of money, that an agency in addict rehabilitation structure its program to include spiritual dynamics? This sounds revolutionary, but, then, maybe only something revolutionary will bring success into a field littered with human failures. In most hospitals and prisons dealing with addicts, the rabbi, minister or priest isn't *part* of the staff. We are never asked to sit around a table *with* you to discuss the best way to help a human person find life's true meaning and purpose. At most, we are tolerated; and see what little good you have done without us. However, for each of your failures I can show you five of your successes when we worked together. And for every five successes we have achieved together, I can show you thousands of your failures when you tried to rehabilitate a soul without our help.

The assumption that psychiatry offers the most successful and the most scientific treatment in the field of rehabilitation of addicts is based more on faith than on demonstrable proof. There is absolutely no evidence to support the alleged superiority of the psy-

chiatric approach over other available approaches. But there is every evidence that psychiatry working *with* pharmacology, medicine, sociology and *theology* is more successful. If recidivism is taken as a criterion, then the psychiatric approach to rehabilitation has been a failure.

Any evening on my knees in prayer, I can count off on every bead of my Rosary,

a clean addict who is off drugs tonight because psychiatry and medicine humbly asked for two things: spiritual assistance and immediate, continued aftercare.

So let's work together as a team. It's too, too big for any one profession. Remember, you'll continue to fail and fail without my kind of help. You have up to now.



Drugs and People

THE REVEREND R. BRUCE WHEELER/*chicago*

WE ARE DEALING WITH A PROBLEM of magnitude, not so much in terms of numbers of people involved, but one made more complex by many different names, many different facets of one overall problem variously called drug addiction or narcotic addiction, and which in reality has nearly as many names as the complexities with which we must deal.

There are the narcotic addicts—those addicted to opium and its derivatives as well as to synthetic opiates. There are the dangerous drug users. There are the experimenters with fringe drugs, such as marijuana and cocaine. There are those who more recently have begun to experiment with the hallucinogens—that class of drugs which create chemically-induced psychoses which bring the users to the brink of insanity and sometimes back. There are those people, we have recently discovered, who have become addicted in the true sense of the word to the family of drugs known as barbiturates. And there

are running through all these categories those individuals who experiment with one, two, or perhaps the whole gamut of these drugs in their search for some better way of life—in order to make life more bearable.

In addition, we must distinguish between the different classes of users who utilize different means in the partaking of these drugs in order to gain whatever experience it is they are seeking. We must classify the narcotic addict into several groups beginning with the ancient and venerable method of smoking opium, with those who inject mainly morphine and heroin directly into the blood-stream, with those who sniff heroin, with another group who inject morphine and heroin, but not necessarily directly into the blood-stream. On an occasional basis, we must take into account the addict who finds his morphine in paregoric, maintaining a so-called drugstore habit; he may either drink paregoric or cook it or boil it down to the residual morphine which he then dissolves in water and injects into his bloodstream. There is another addict who finds his relief in the

Chaplain, House of Correction, Chicago, Illinois.

codeine found as an exempt narcotic in different cough medicines. We turn also to the "dangerous drugs"—the amphetamine and barbiturate families—especially the so-called pep pills available in tablet form to be taken orally or dissolved in a solution of, we hope, sterile water and injected—or those that come already immediately ready for injection. This is to name but the majority of different types of users and methods.

It would seem useful also to note the addict who, because of his social position and income-availability, never has a delinquency problem related to his addiction but who nonetheless is as completely and entirely dependent upon his drug as is the delinquent, for his ability to function at all in this life. And another distinction must be made of the patient who is given barbiturates or amphetamines in legitimate medical practice for some pathological condition best treated by these drugs, and the pill-user who takes these as his substitute or because of the unavailability of the stronger opium-derivatives. Within the category of pill-users, there are those who under legitimate medical direction are taking these medicines for whatever reasons their doctor deems best—in this category we must distinguish between those who follow the doctor's directions exactly and those who, thinking that they know best, take it upon themselves to increase the dosage legally prescribed because they have found some pleasure, some surcease, some relief, and hold the opinion that more of a good thing is necessarily better.

To further understand the complexities involved, we must now turn to a different phase and try to understand positions of those who professionally or semi-professionally have a concern for all these families of drugs and the deleterious effect they have upon human behavior. We have, for instance, the group on one extreme whose only orientation is that in the field of enforcement. They believe that the only way to eradicate the evils that may arise from misuses or abuses of drugs is to make stiffer and stiffer penalties—to spend their

lives trying to hunt down and search out all those involved in any way. Their remedy is longer and ever increasingly longer periods of incarceration. Again, on the other extreme, we have that group of concerned individuals who are firmly convinced that other countries with this problem have found the "successful method" by advocating the abolishment of enforcement procedures entirely so that the only real evil in the whole traffic is to be found in that behavior which leads to and fosters delinquency. To this group, therefore, the ultimate solution seems apparent—to make readily available to those who seem to need narcotics the substances that will allow them to function semi-normally.

Mainly because of these many categories and sub-categories, the various groups and sub-groups, there has arisen much confusion and misunderstanding, and people who don't find sympathy for their cause and viewpoint automatically assume that the person with whom they are discussing the matter must be on the opposite and extreme end of the scale of their thinking. Much mistrust and suspicion has arisen, so that a lack of cooperation and a negative aura has been created.

Many of these things have been discussed during this conference. It is to be hoped that out of this will come a realization on the part of many that there is a middle-ground of thinkers, a group who believe that a little bit of both viewpoints is necessary for a solid and substantial treatment and control of the problem. It is precisely these terms—treatment and control—that we must use, because the word "cure" has not really a positive but rather a negative effect upon all those who hear it. We find many addicts who have been drug-free for many years but as in the case of the alcoholic, we would not want to claim "cure." At either end of the extreme viewpoints, the word "cure" seems to be an impossibility and therefore, it gives the impression that all efforts expended in this direction are doomed to meet with failure.

But it is not my purpose to expand upon

or explain all the many complexities, nor even especially to moralize on this problem. I wish only to give the viewpoint of one working directly in the field without any special technical knowledge, but rather with a day-to-day personal experience—talking and counselling with these people.

What is the morality or immorality of the use of these drugs, *per se*, is not what is at issue here. It should be more important to all of us assembled to examine the question of why these people feel that they cannot face life without a crutch. And the more compelling question of what to do with those who because of the need of this crutch in the quest for happiness fall into a delinquent way of life. As Isador Chein and his associates in that remarkable text on drug addiction, "The Road to H," have so aptly pointed out, the people involved in the use of these crutches are people who are in pain. And there are few if any enlightened people today who would not agree that pain is pain, whether it is psychological, or pathological in terms of physical disability.

Research at St. Leonard's House here in Chicago, at the House of Correction in Chicago, and at the state penitentiaries of Illinois, Joliet and Statesville, has brought home to us very strikingly the fact that approximately 25% of those unfortunates who run afoul of the law, who enter into a life of delinquency, can trace their delinquency to a drug addiction background. It would appear that to argue the point as to whether or not the addict turns to crime to sustain his habit or, as has been suggested, takes drugs in order to sustain himself in this delinquent way of life, is really begging the question and is almost a matter of which came first—the chicken or the egg.

In dealing with all forms of delinquency, the primary concern is with people who somehow have not been able to make the normal adjustment to their society and culture—whether through economic status, psychological deficiencies, deprivation, illness, ignorance, or what have you. Even if we were to be successful in eliminating

all abuse of 'dangerous drugs,' if we were to be successful in eliminating all sources of narcotics, if we could eliminate all successful crime—we still would have no solution, because this society would still have a class of individuals deficient in the qualities and attributes and equipment necessary to find a rewarding and satisfying existence in our accelerated twentieth century culture. The next step in eliminating social evils then would be to eliminate all sources of alcohol, and we are all too aware of the debacle that followed the passage of the prohibition amendment in this country. We would put the tobacco industry out of business, thereby depriving millions of the satisfaction they derive from smoking cigarettes, cigars, and pipes. We would go to the ridiculous extremes of eliminating the manufacture, or controlling the distribution, of all food that is harmful to diabetics, all foods harmful to those who are overweight. Ultimately our criterion would be the elimination of anything deemed to make man dependent upon anything but himself in this society.

The addict is a person with little motivation, even less willpower. If we are to have a true understanding of these people and their problems, we must take these facts into account. We must realize in our dealings with them that we are working with people who have not known what their own problems were, for if they did they would not have to turn to addiction in order to try to make these problems disappear. In short, we are dealing with people who have already been declared sick by the courts of our land. The fact that Chicago and Cook County have the second largest problem in this country and the least amount of effective program for dealing with it is both a sin and a disgrace.

But, on the positive side, the very fact that this conference is taking place—that so many distinguished people working in all phases, from one end of the scale to the other, are assembled here to discuss and debate and to deal with this problem—this gives us every reason for hope. It behooves us therefore to remember that there

are people who are not able for one reason or another to face what you and I would consider a normal daily routine of living with its obligations, responsibilities—they do not have the ability to find job and satisfaction in that routine. And because of this, these people are forced to create through outside means—the narcotics and drugs—a false world for themselves where they cannot be attacked, where they cannot be hurt, where their problems cannot bother them as long as the drug has control of their minds and their bodies. These are people who are not concerned as to whether or not their behavior is conventional. They are not concerned that in order to maintain this existence which seems to be so satisfying to them, they must lead a concomitant life of delinquency, preying upon others and being preyed upon themselves—being both the victim and the one who benefits from the victimization. It becomes important in our dealing with these people to understand the problems and their delinquencies and their anti-social behavior—not necessarily to condone their actions but to direct our efforts toward the alleviation of the conditions that make this pattern of behavior their only course of action.

It is also important at this stage to bear in mind that although better than 98% of true drug addicts do relapse to their old addiction after a short period of hospitalization and care—a so-called cleaning-up process—that this is no ground whatsoever for having an attitude of despair or for feeling that there is not much more to be done—that the situation is hopeless—and all similar ways of thinking. Nor is it really very fruitful to question the motivation of addicts who come to this writer and to others working in the field seeking help for their addiction problem—to question whether they are ready to stay off drugs and their former life—to look with suspicion, thinking that perhaps they are just coming to us to use us as a means of reducing the habit to a manageable size. We all know the costs involved in maintaining a narcotics habit in any large city in this

country. We also know the poor quality of the heroin generally available, and that in itself also gives no cause to deprecate their attitudes, their feelings, their desire to have help by shoving them off and saying that they aren't very sick anyhow. This approach, this attitude solves nothing. It would be unthinkable for any person in dire need of mental or physical help for any pathology to be turned away from an institution that is equipped to offer even minimal aid in an emergency situation. Yet here we are in Chicago, faced with a situation where the addict has little or no alternative than to have himself locked up in a jail hospital in order to have a small amount of treatment to get the drug out of his system. Or as another alternative—to have himself committed under a civil commitment to one of the state mental hospitals for what can be at best described as a sitting-out or resting-up period. It is almost inconceivable that there aren't more doctors familiar with the problem of drug addiction, although we are indebted to the Illinois State Medical Society and its membership for its initiative in a field long neglected by general medical authorities.

In addition to the deplorable lack of medical withdrawal facilities for addicts in this area and the gaping deficit in follow-up supportive therapy, we have the lack of places for people engaged in this work to refer those who come seeking help. For in spite of the little efforts we are able to expend in behalf of the addict—in spite of the fact that we are temporarily able to alleviate his withdrawal syndrome—the addict is left here in Chicago and Cook County with no community resources for counselling and rehabilitative assistance, so he instantly returns to the same drug-ridden environment from which he took but a short respite.

Certainly our aim should be to halt, if at all possible, the illegal importation and distribution of narcotics in this country. Certainly we should attack by all sane and sensible means the illegal and delinquent economy that preys upon the addict's weakness and lack of will-power and which turns

him to a life of crime in order to sustain his existence. And certainly we should pursue with high hope the many promising experiments and developments that are taking place in the fields of psychiatry and pharmacology—never losing sight of the fact that at the root of this problem lie individuals with broken degraded lives. Our purpose is to rebuild lives. We must devise means of returning to our culture those who either have abandoned, or have been abandoned by that culture. We must seek ways of returning to the human family those who have felt themselves to be or those whom we have made to feel outcasts. As in the raising of children—and in a certain sense we are dealing with children, that is, immature individuals—we must remember that the school of extreme permissiveness is not successful. The strict and disciplinarian approach, the punitive approach, is not successful. But both of these, meeting on a middle-ground of understanding and firmness, love and patience, can make the difference.

Above all, all of those working in this field must be very cautious to make themselves feel trusted by the addict—to go out of our way to avoid any appearance of exploitation. We must meet them on the common ground of our humanity. To do otherwise is only to perpetuate in our modern age of enlightenment our irrational fears of the mentally ill—to perpetuate our abysmal ignorance and lack of understanding of the leper—to refuse to see that beyond prison-bars and stone walls lies the solution to present-day delinquency problems—in short, to perpetuate our fear of those things which we do not understand and to insist that morality lies in the thing itself rather than in the use or misuse of the thing.

In the final analysis, it is human behavior with which we must become concerned. We must seek to discover why fellow creatures cannot live in harmony in society which man has created—and again, that morality is a phenomenon of creatures and not of things.



The position of the bureau of narcotics

GEORGE H. GAFFNEY/*Washington, D.C.*

WHEN IS THE BUREAU OF NARCOTICS going to stop practicing medicine without a license? As Deputy Commissioner of the United States Bureau of Narcotics, this is one of the most common questions to which I am exposed. It is also one of the most unjust.

Of course the primary concern and responsibility of the Bureau is the proper enforcement of the federal narcotic laws. But to say this solves nothing unless the laws themselves be understood. Only when

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it is realized that these laws deal directly with the distribution of narcotic drugs by physicians does it become clear that the Bureau has a necessary and inescapable official concern in any program or course of medical treatment which involves the dispensing of narcotic drugs to patients, addicts or otherwise.

Having said this, let me hasten to add, with emphasis, that the Bureau of Narcotics is not in the business of making medical judgments itself or dictating medical judgments to others. The Bureau would never presume to tell the medical profes-

sion how narcotic addicts should, or *must* be treated. It would only be prepared to say that not everything called treatment is necessarily such, and that the dispensing of narcotics to an addict or any other patient, *except in the course of legitimate practice*, is an offense punishable under federal laws and regulations.

There has been much confusion and misunderstanding on these issues. The basic federal narcotic control statute, the Harrison Act, permits the dispensing, distribution, or giving away of narcotic drugs by a physician to a patient "in the course of his professional practice only." Similarly, the federal regulation which pertains to the issuance of prescriptions to an addict or habitual user of narcotic drugs is directed only at those orders which purport to be prescriptions but are in reality issued "not in the course of professional treatment."

Thus the physician who acts beyond the scope of professional medical practice is in violation of the plain words of the statute and is subject to its penalties. How can it then be said that the Bureau imposes any restraints upon the freedom of physicians to prescribe and dispense narcotic drugs? It is the law itself which imposes the restraints. And this is a point which is often missed by those who take the Bureau to task for intrusion into medical practice.

There is another point which often eludes the Bureau's critics. Who is it that makes the crucial judgment as to whether the conduct of a physician falls within or without the limits of legitimate practice? Is it the Bureau of Narcotics? Of course not. It is the medical profession itself that makes the judgment, and it is upon this judgment that lawyers and courts rely in determining whether a physician has committed a federal narcotics violation.

Now it is perfectly obvious that before lawyers and judges can make a determination of any kind, they need to know the facts. It is here that the Bureau of Narcotics comes on the scene. Charged with the enforcement of the narcotic laws, the

Bureau must investigate possible and suspected violations of those laws. And to investigate effectively, the Bureau must have an idea of what constitutes legitimate medical practice and what does not.

Accordingly, I submit that the only problem we have to solve—and when I say *we*, I mean the medical profession and the enforcement officers delegated the responsibility of enforcing the narcotic statutes and regulations—is to determine what constitutes "professional practice" or "professional treatment." I think you will agree that it would be absurd and a patent impossibility for an enforcement agency such as the Bureau of Narcotics to attempt to follow any guidelines of professional practice regarding the treatment of addiction other than those established by the highest medical authorities.

As early as 1921, an American Medical Association Committee issued a statement which was, in effect, a definition and a code of medical practice regarding the treatment of narcotic drug addiction. Further pronouncements by the AMA concerning treatment of addiction were made in 1924, 1952, 1957, 1959, 1962, and most recently in 1963. Perhaps you are familiar with the joint AMA-NRC report on "Drug Addiction and Narcotics" which appeared in September of 1963. This joint report reaffirms and elaborates the position taken by the AMA and NRC for over 40 years. This position of the AMA-NRC is accepted by the Bureau of Narcotics as the code of ethical medical practice.

The question then logically arises, "If the AMA and the Bureau of Narcotics are in harmony, then why is there all the controversy regarding treatment of addiction?" To answer this question it must be realized that there are many well-meaning and articulate persons or groups who do not agree with the position of the AMA. Since the Bureau makes an easier target than the AMA, these critics usually shoot at us and usually shoot wildly. Instead of raising valid issues regarding techniques of treatment of addiction, these critics—always quoting each other as authority—

prefer to dwell on such false issues as our "persecution of physicians," our "inhuman 'cold-turkey' withdrawal," and our "false addiction statistics."

To illustrate the type of false statements which are employed against us, I quote a passage from a book just published entitled, "Psychiatry and Criminal Law," by Mr. Sol Rubin:

"Sudden withdrawal is the only procedure recognized and sanctioned by the Bureau of Narcotics. It is recommended, indeed insisted by them for all addicts."

This quotation, credited to a 1963 report of the New York Academy of Medicine, is in direct conflict with the publicly stated position of the Bureau. Mr. Rubin also included in his recent book an even more interesting quotation when speaking of the 1963 AMA-NRC statement I mentioned previously. This quotation is as follows:

"The present official position of the national association of doctors is, with slight liberalization, the product of the Bureau of Narcotics of the United States Treasury Department."

This quotation, credited to "Dimock, review of Eldridge, Narcotics and the Law," is again without factual support. With quotations such as these appearing in well-distributed books, is it any wonder that confusion exists as to our position in treating addicts?

Another favorite target of the critics is the Bureau's compilation of addict statistics. In 1964, we reported 55,899 active narcotic addicts in the United States and in 1965 we reported 57,199. We have heard estimates from other quarters which run as high as 200,000. In fact, a recent television program mentioned a national figure of three million addicts. I would like to explain, however, that our statistics are *not* an estimate but rather are compiled from addict reports received from Federal and State enforcement agencies and hospital facilities.

When our Bureau speaks of "active" addicts we mean addicts who have come to the attention of a reporting agency within a five-year period. In other words,

an addict entered in our annual "active" addict figure is carried for a period of five years. After five years have passed and this addict has not again been reported as addicted, this addict is then dropped from our figure and the person is no longer considered an "active" addict. Also, addicts are dropped from the active list when information is received that they are deceased or when they have been sentenced to a term of imprisonment for five years. We believe that some cutoff point is necessary, and our experience has shown that five years is a realistic period for this purpose. Of course, if a State or city does not use some system of keeping their addict figures current, as we do, then it is easy to see why we have wide variations between estimates of the number of addicts.

Unfortunately, many persons have not taken the time to properly evaluate our addict statistics and they assume in error that our statistics are either pure speculation or deliberately false. Let me assure you that *every* addict included in our statistics is supported by a separate "addict report" card in our files and every report we receive which contains the pertinent data is included in our statistics.

Yet another widely circulated comment is that the Bureau of Narcotics has ignored the decisions of the Supreme Court concerning the treatment of addiction. In particular, the Bureau is accused of defying, with impunity, the 1925 decision of the Supreme Court in *C. O. Linder v. United States*, thereby forcing physicians to abdicate their lawful role in the handling of narcotic addicts. I would like to answer this accusation.

The evidence in the *Linder* case showed that Dr. Linder had given one tablet of morphine and three tablets of cocaine to an addict. The indictment did *not* allege that the doctor had given these drugs other than to a patient and other than in the course of professional practice only. Noting this absence in the indictment, the Supreme Court held that it could not supply the omission by holding as a matter of law that the sale of four narcotic tablets neces-

sarily transcends the limits of professional practice. Hence, notwithstanding the construction that our critics have sought to place on *Linder*, that decision *cannot* be used as authority for a rule that a physician may indiscriminately prescribe or dispense narcotic drugs in any quantity for as long a duration as the physician desires.

To the contrary, in at least ten cases, decided by five different United States Courts of Appeal throughout the years *since* the *Linder* decision, the Appeal Courts have affirmed the convictions of physicians for making unlawful sales of narcotics when the indictments, unlike that used in *Linder*, duly negated "good faith" and "in the course of professional practice." It is interesting to note that not *one* of these many Appeal Courts has chosen to place the construction on the *Linder* case that is so strongly espoused by our critics. Moreover, of prime importance is the fact that the Supreme Court has *denied* writs of certiorari in two of these appeal cases. Surely, the Supreme Court would have reviewed the Appeal Courts' decisions if they had been considered inconsistent with the *Linder* case.

In addition, the accusation that the Bureau dictates policy in the field of medical treatment of addiction, and imposes its policy on the courts, is a gross misconception of the Bureau's responsibilities and indeed of the Bureau's jurisdiction. *First*, the appropriate United States Attorney must review the facts uncovered by the Bureau investigation to see if a prosecutable offense has been committed. *Second*, a United States District Court judge presides at the trial, hears expert evidence of what constitutes good medical practice, and interprets the law and instructs the jury accordingly. *Third*, upon appeal of a conviction, the case is reviewed by the Appellate Section of the Department of Justice, and then ruled on by a United States Court of Appeals. Last, if the case is taken to the Supreme Court, it is submitted to the Court with the concurrence of the Solicitor General.

Hence, it is literally impossible for any agency such as the Bureau of Narcotics to have imposed for about 40 years an erroneous interpretation of a Supreme Court decision. To assert that the Bureau is responsible for a misinterpretation of applicable law which caused the convictions of physicians since the *Linder* case in 1925, is tantamount to saying that the Bureau has been capable of dictating policy and law to each of the agencies and courts I just mentioned. There have been about 1,600 convictions of physicians in Federal court since the *Linder* decision for violations of the Federal narcotic laws. To have imposed our views in contravention of the statutory and case authority is an achievement truly impossible under our system of due process.

Lastly, let me put to rest the notion that the Bureau opposes new solutions or constructive thinking in the complex field of addiction treatment. Medical care of addicts and enforcement of the narcotic laws are not mutually exclusive goals. They are both parts of the same larger problem, and advances on the medical side can only benefit those of us who work on the enforcement side. The Bureau therefore welcomes good-faith medical approaches to the problem of addiction — approaches aimed at cure and undertaken according to accepted professional standards.

The Bureau also welcomes discussion of the narcotics problem, for we realize that discussion stimulates public awareness and that awareness stimulates progress.

We try to correct errors of fact because we think that discussion, to be useful, must be based on fact. We particularly, welcome fresh ideas. We believe that we are making progress, and we have adopted a number of new ideas in recent years. But we realize that we do not have perfect solutions. We also recognize the fact that the critic has a place in discussion, even if he does not have a proposal of his own to put forward. We object only to irresponsible criticism based on unreliable information or misstatement of facts.

I am very pleased to have been able to

speak to you today, not only because it is always an honor to address a distinguished gathering, but also because a conference such as this one provides a forum for the very kind of informed and penetrating discussion which can lead to progress.

Society at large owes a great debt to the thousands of doctors who have invested so much of their time and energy in coping

with the narcotics problem. The greatest debt of all is owed by the narcotics addict who is successfully rehabilitated. But I can assure you that no one will recognize his debt to you more clearly nor express his appreciation more willingly than the enforcement officer who must deal every day with the tragic consequences of narcotics addiction.



Mental health logistics

HAROLD M. VISOTSKY, M.D./chicago

WE SHOULD FIRST RECOGNIZE that major resources for treatment of the narcotic addict are altogether non-existent in Illinois. At one time, in the late 1950s, there were three state-supported clinics. Today, there are none. For a number of years, the Illinois Department of Mental Health has admitted for treatment a few narcotic addicts who are mentally ill and an even smaller number of addicts who do not have a concomitant mental illness.

Special facilities for treatment are plainly and painfully lacking. This, despite the fact that more known narcotic addicts reside in Illinois than any other state, with the exception of New York and possibly California. This situation places an unfortunate burden upon our courts, law enforcement and other agencies, and the addict himself.

Drug addiction is not new to this country. Before federal laws were enacted, a number of individuals were addicted to narcotic drugs through special circumstances, some through legitimate medical situations requiring the relief of pain. Others, to whom medications were easily

accessible, turned to them for the same reasons and dependency on the anxiety-depression relieving effects often followed.

Appraisal of the problem of narcotic addiction has in the past two years become increasingly prominent in medical circles, the news media, and most certainly in the deliberations of local, state and federal governments. Accompanying this interest is an awareness of the increasing numbers of persons addicted to or dependent on narcotic drugs.

We cannot accurately measure the number of narcotic addicts in our population. We are aware only of those who come to our attention voluntarily, through referral source or after an encounter with a law enforcement agency. The United States Bureau of Narcotics has reported a narcotic addicted population in Illinois in excess of 7,000. But it can be assumed that this number is relatively small in relation to the real number of those in our state from all economic levels who are addicted in varying degrees to narcotics.

Poverty, the laws, illegal suppliers and the thrill-seekers have unknowingly formed a confederation that is creating addicts on an enormous scale.

Director, Illinois Department of Mental Health, Springfield, Illinois.

One can see that the same personality seeking relief from inter or intra-personal conflict may well be encouraged to try something "better." It is also easy to addict these people either directly or by adding narcotics to non-narcotic preparations. Support of the habit then becomes a problem not for law enforcement agencies alone, nor for the physicians, but rather for the entire community, the community that has been attempting to hide its head in the sand.

The following is a quotation from an editorial of the New York District Branch of the American Psychiatric Association:

"It is interesting to note that Edward Preble, Associate Professor of Anthropology in the New York School of Psychiatry relates the absence of adolescent gang warfare in Manhattan to the increasing use of narcotic drugs by this age group. Professor Preble, a streetworker during the early 1950s, was well-acquainted with many gangs and gang members. During the late 1950s, gangs and their bloody encounters faded away. Morphine, heroin and related drugs are pacifiers. They provide a feeling of complete realization—'heaven' or 'nirvana.' They obviate the need for the gang family and require only solo or duo activity to buy the means to accomplish the narcotic results."

A number of theories about the treatment of the narcotic addict have been proposed from time to time and for many years. In practice, each has been an abysmal failure, a fading success or uniquely related to the individual in charge of the program.

We may well pause to reflect upon some recognized truths:

1. Gradual withdrawal of narcotic drug or its replacement by another drug is preferable to unqualified withdrawal.

2. There is a consensus that definite physiological components in narcotic addiction and our clinical records have demonstrated that sudden withdrawal may produce convulsions or other critical symptoms or even death.

What can we do for the individual who

has withdrawn? How will he remain alive and functioning without a regular dose of the narcotic drug?

There have been many answers—psychoanalysis, group psychotherapy, individual psychotherapy, drug treatment, synanon, halfway house, and others.

According to a study by Doctor Sando Rado, while director of the Berlin Psychoanalytical Institute, ninety-five per cent of the patients failed to refrain from narcotic addiction following psychoanalysis.

Similarly, ninety-five per cent of the patients discharged from the federal hospital at Lexington returned to narcotics following their release.

Why did those discharged from Lexington return to their former addiction?

I think we may find the reason, in part, in the fact that these patients returned to an environment without the appropriate resources there to provide an adequate follow-up program. For many, this environment is the very disorganized ghettos from which they had originally come.

At the same time they bore the additional stigma of having been in a federal hospital and thus were considerably less employable than before.

The United States has the greatest number of drug addicts per capita in the world. Although it has the strictest laws in the area, it also has the most efficient under-world organization engaged in promoting drug addiction.

It is not possible to consider the problems of narcotic addiction without giving attention to the many issues that are closely related to it.

These issues include the problems of poverty, the disorganized and under-privileged environments, the criminal aspects in the traffic of narcotics to victims, the acting-out, thrill-seeking individuals who sample non-addicting drugs and drugs which lead to drug abuse, such as marijuana, LSD, glue sniffing, amyl nitrate and other chemicals.

A society that extrudes anyone who is engaged in the use of any drugs, laws that forbid the medical profession to treat addicts and which make their problems a crim-

inal offense—all lead to an increase in drug usage and an accompanying confusion. Though many different kinds of treatments have been wholeheartedly endorsed, each by its own group of specialists, many have come to recognize the need for broad spectrum approaches to the problems involved.

This I believe is the direction of choice. With legislation pending, it is important that all professionals and all rehabilitation agencies and, in fact, all community leaders engage in a coordinated and broad spectrum approach to the problem of narcotic addiction.



Economic impact of drug addiction

O. W. WILSON/chicago

ADDICTION IS A WORD that is given rather varied meanings. Most authorities use it only in connection with opiates whose hold on the addict is such that he cannot stop taking these drugs without going through a very unpleasant illness commonly known as "withdrawal." In short, the addict is one who has a physical dependence on the drug to which he is addicted.

There are many persons who are users but who are not addicts in the strict sense of the term or at least are not yet so seriously addicted as to make withdrawal a serious problem for them.

I define the terms "addicts" and "users" because they are often used carelessly and interchangeably and it is therefore difficult to appraise the narcotic problem accurately from a statistical point of view.

We know that there are over 50,000 narcotics and dangerous drug users in the United States with varying degrees of physical dependence. We keep careful records of narcotics and dangerous drug users in the Chicago Police Department and we estimate that there are about 9,000 such users who are known to the police. Probably only about 5,000 of these are properly classified as addicts but even so, this is a startling number.

Superintendent of Police, Chicago, Illinois.

Like the hen and the egg, one often wonders which comes first, criminality or addiction. Commissioner Henry L. Giordano of the Federal Bureau of Narcotics says that preaddiction criminality approaches the 90% figure and that it is generally the criminal who turns to addiction rather than the addict who turns to crime. Our figures in Chicago seem to indicate that about 45% were criminals before they were addicts and that 55% turned to some form of crime after addiction. This manifests itself mainly in some form of theft, burglary, robbery, narcotic peddling or prostitution — crimes necessary to support the habit.

One addict with a moderate habit will require roughly ten to twenty dollars a day to buy heroin. Since few addicts have the financial means to support such a habit and since many of them were criminals before they became addicted, it is only to be expected that they will turn to some form of crime to support their habits.

The sale of stolen property to a fence (as we call receivers of stolen property) only brings about a 20% return at best on the true value of the articles stolen. Therefore, the addict must steal anywhere from \$50 to \$100 a day to support his habit. Multiply this by the number of addicts and it gives you some idea of the enormity of the

problem and the tremendous economic drain on the community. The businessman must sustain a loss through petty crime which results in mounting insurance rates and other costs. The consumer must pay an increased mark-up of 1% to 2% to help defray the cost of this loss. The taxpayer must assume a heavier burden for increased police protection, courts, prosecutors, penal institutions and hospitals.

Now another important fact to bear in mind is the source of narcotic addiction. We are often told that the narcotics peddler is the pusher who spreads addiction and that he entices boys and girls to use narcotics so that he can hook them and sell more narcotics.

The truth of the matter is that it is the addict himself who spreads addiction—the association of the addict with the non-addict. Our Chicago statistics bear this out. Reasons given for the use of narcotics are “kicks,” “curiosity,” “thrill,” “joy-popping,” “persuaded or dared,” all attributable to his association with a narcotics user in about 85% of the cases.

The problem, therefore, is to reduce addiction.

Narcotics addiction is partly a medical problem but it must be recognized that only rarely is a narcotics addict interested in seeking a cure. Some will go through withdrawal in order to reduce their physical dependence and thus cut the cost of their habit. But rarely will an addict voluntarily seek a complete cure. He needs a psychological crutch to motivate him. It is easy enough to take him through the withdrawal symptoms by simply confining him but what is needed is some method of enforcing his abstinence after his release.

California has had quite a bit of success with the use of Nalline. Nalline is antagonistic to opium and its derivatives and thus produces easily recognized symptoms from which a doctor can definitely determine that a person has or has not been using opium or one of its derivatives. California has been using a Nalline Testing program since 1956. In Oakland, California, the program is jointly funded by the State Parole Agency,

the County Probation Department and the City of Oakland at an annual cost of about \$22,000. In 1965, 7,657 persons were tested—58 were found to be positive with Nalline and 21 positive from other symptoms, such as needle-marks. Approximately 450 parolees or probationers regularly report for these tests. A marked reduction in the use of narcotics has taken place.

Prior to Nalline testing there were approximately 50 known narcotics peddlers in Oakland. Today there are only about five. Narcotics peddlers do not stay around when their market is dried up.

Before concluding, I think I should comment on the case of *Robinson vs. California* in which the Supreme Court of the United States held that to be an addict is not a crime; that to punish addiction would be to punish for a chronic illness; and that to do so would be unconstitutional since it would constitute a cruel and unusual punishment. However, this decision has had no effect whatsoever on the California Nalline program because other portions of the California statute make it a crime to use narcotics or to be under the influence of narcotics and these portions of the statute have been held valid by the California courts. In the 1963 session of the California legislature, the words “addicted to the use of,” which the United States Supreme Court found fault with, were deleted.

We are making some limited use of Nalline testing here in Chicago and in Illinois on parolees. Our lower courts have been somewhat hesitant about enforcing Nalline testing as a basis of a charge of “using” or “being under the influence” of narcotic drugs or even as a condition of probation but I am confident that our Supreme Court of Illinois would uphold it. Our statutes are similar to the California statute. It is the opinion of State’s Attorney Ward that there is ample statutory authority for enforcing Nalline testing in Illinois and I firmly believe that it would have the same salutary effects here that have been experienced in California. Nalline testing may not be a complete answer to our problem but it is an answer worth trying.



The legislator looks at addiction

THE HONORABLE JAMES B. MORAN/Evanston

VULNERABILITY TO ADDICTION exists in virtually every society. But the shape and character of narcotics addiction in America have been molded by our laws. The elaborate legal structure we have developed to regulate the availability of narcotics dictates the dimensions and details of that problem. Understandably, this conference emphasizes the medical, physiological and psychological aspects of addiction. It cannot safely ignore, however, the extent to which the profile of the addict responds to the pressures of the legal system under which he lives.

The legal structure makes addiction primarily an urban problem. There are not many addicts down on the farm. Addiction requires a supply of drugs, a user with sufficient economic resources to purchase narcotics, and a distribution system. In a small town, or even a small city, both the supplier and the addict are visible and vulnerable. They lack the anonymity granted them by a crowded city neighborhood where tolerance for unconventional conduct is high. The opportunities for an addict to support addiction by petty crime or prostitution may be circumscribed by his excessive visibility. Transshipments of narcotics to numerous towns require a more elaborate distribution system and increases risks. Finally, while the addicts may tend to come together in the twilight addictive culture partly because of their own psychological needs, this ingathering also provides mutual safety for self and supply.

Member, Illinois 74th General Assembly,
Evanston, Illinois.

This is not to deny that the small towns do not have an occasional physician addict with an assured supply, or the housewife who meets life in a haze of alcohol and barbiturates. But not many shoot heroin in the alleys and railroad flats of Main Street, U.S.A. Main Street exports its addicts to New York, to Chicago, to Los Angeles or San Francisco, to the other large population centers of our nation. The big cities, with their ghettos, their slums, their tensions and frustrations, may provide fertile breeding grounds for addiction. But they also, given the existing legal controls, provide the most feasible means for mating the addict with his supply. Iowa may have as high a proportion of potential addicts as Illinois, but Iowa's addicts will generally end up in Chicago or New York.

What, then, is the existing legal structure?

Narcotics legislation has until very recently been confined almost solely to control of supply and restriction upon distribution. Thus, federal law, influenced by supposed Constitutional limitations, has based criminal offenses upon the revenue laws. It levies heavy penalties for sale or possession without appropriate forms, purchase or sale from a package without a tax stamp or aiding in the distribution and concealment of narcotic drugs obtained without the appropriate forms or not from the appropriate package.

State law, under the Uniform Narcotic Drug Act, is more direct. It prohibits sale or possession except under strict controls. In addition, possession of hypodermic

equipment by unauthorized personnel is an offense. State and federal restrictions upon the sale or possession of barbiturates, amphetamines and hallucinogens have increased and in all probability will continue to increase. Finally, several statutes still decree that addiction itself is a crime, although this section has been invalidated by the Supreme Court in *Robinson v. California*.

This legislation rests in the premise that addiction is socially undesirable. For a variety of reasons, we begin with our society's conclusion that it is intolerable that a portion of the population exists in a continuing state of drug-induced euphoria. Our culture has not been and is not prepared to risk the social consequences of the general availability of narcotics.

While restriction upon availability of supply has been, is and will continue to be a basic part of our narcotics legislation, present law bears the indelible stamp of mythology. Addiction invokes images of the dope fiend lying in wait to ravish the village maiden or the fat and greasy pusher debauching innocents on the school playground. These images find expression in the penalty sections of present legislation.

Federal penalties range all the way up to execution. So far as I know, no federal prosecutor has yet had the temerity to demand the death penalty. State penalties range from a minimum two years for possession to ten years for sale, without possibility of probation. The barbarism of those penalties is more understandable when one realizes that one person handing a reefer to his friend for one drag has accomplished a sale and is subject to the ten-year penalty without probation. While courts indulge in various gymnastics to avoid the rigors of the law, such as reducing possession to disorderly conduct or sale to possession, it should be wholly unnecessary that they do so.

At the same time, I must concede that there is a certain inner consistency to these penalties. It is the logic of despair. Supply must be restricted to discourage potential addicts from becoming users. Since

supply is restricted, narcotics addiction is expensive and normally can be financed only by crime, such as petty theft and prostitution. Addicts can seldom be "cured." Therefore, addicts on the street will engage in costly antisocial acts and these can only be prevented by imprisonment. Since addiction and crime are intolerable, there are no alternatives except to write off the addict, to lock him up until he may "mature out" of his propensity for addiction.

Unhappily, until very recently this logic had a certain brutal reality. The alternatives were restricted, if they existed at all. Increasing the availability of narcotics through liberalizing legislation might possibly have decreased narcotics-related crime, although this is questionable. Given the existence of a substantial illegal market, it is more probable that the addict would increase his use by supplementing legally available narcotics with the "five cent" bags from illegal sources. As today's highly diluted heroin illustrates, the level of narcotics use depends more upon economics than physiology. In any event, increased availability assuredly would have increased addiction, contrary to the basic assumption in our society that addiction is undesirable.

While short-run detoxification has little impact on addiction, it has compelling attractions both for humanitarian and social reasons. The agonies of the "strung out" addict are relieved. The economic compulsions to commit crime are, at least temporarily, reduced. Until recently, however, few states have had either withdrawal facilities or the legislative framework to permit and encourage their creation. In Illinois, the sole treatment facility for a number of years has been twelve beds in the Chicago jail for detoxification, and even these are open only to those who meet the strict entrance requirements of a conviction, or at least a charge, of violating an ordinance against the peace of the citizens of the City of Chicago.

Yet even here the impact of more enlightened legislation fostering such facilities would probably have been minimal. The short sentence in the local lockup for va-

grancy or some other handy and vague mis-demeanor has traditionally been society's harsh, often cruel, but reasonably effective substitute for withdrawal facilities, so long as society was more callous to the requirements of due process than, hopefully, it is today. Moreover, strict law enforcement has made even self-detoxification feasible. The "strung out" addict generally has a low tolerance level because of the diluted heroin peddled in today's market.

The biggest opportunity to do something positive in past years about addiction was missed—missed because of an injudicious judicial decision construing the Harrison Act, in which the Supreme Court went beyond the facts of the case before it, because of the enthusiastic acceptance of that decision by law enforcement agencies and because of the excessive timidity of the medical profession.

Basic federal law, the 1914 Harrison Act, permits a physician to dispense narcotics "in the course of his professional practice only." No federal law prohibits the treatment of addicts, gradual withdrawal through the administration of decreasing amounts of narcotics or even the administration of sustaining dosages if this should be medically appropriate. This provision makes no reference to addicts. The Supreme Court, unfortunately, shortly after the Harrison Act's passage used sweeping and general language in condemning a physician who had clearly, in the particular case, engaged in the narcotics trade. Federal enforcement authorities and state law both eagerly followed that interpretation. The medical profession largely fled from the field, leaving it to the source, the informer, the police, the prosecutor and the penal institutions of our land.

Although the Supreme Court, in subsequent cases, explained that it really had not meant to say what it obviously had said, the damage had been done. Until recently, the medical profession refused to become involved, in any meaningful sense, in the problems of narcotics addiction. I have some question whether its reluctance was due solely to doubts concerning its legal

powers or was, instead, due in significant measure to a reluctance to treat patients where progress was improbable, difficulties considerable and the frustrations maddening. In any event, I am most gratified that the Illinois State Medical Society has sponsored this conference if for no other reason than it evidences the fact that the medical profession in Illinois, as well as other states, has returned to the field, has accepted the challenge and is ready to do battle.

Within the last decade we have begun, and only begun, to grapple with the problems of addiction. Legal restrictions upon supply will remain, and I believe that they should. But the effort to decrease availability, and therefore the opportunities for addiction, is only half the answer. With the proliferation of chemical compounds with legitimate medical applications but also with narcotic, habituating or hallucinogenic effects, it may become less than half the answer. The other half, or more than half, the answer is the treatment and rehabilitation of those who have become addicted or habituated. To grope for, to learn some possibilities for progress toward that answer is why we are here.

To say that nothing has been done in the past to minister to the addicted may be unfair to those individuals who have toiled almost alone in this area, individuals who have provided the basic knowledge from which we now proceed. But I speak as a legislator, and as a legislator my conclusion is that the total visible impact is inconsequential.

Certainly it is unfair to those whose research at Lexington underlies much of the exciting ferment we see today. Yet Lexington has always been little more than a mammoth detoxification facility, a "hospital in the park" from which its patients return to families, family problems, neighborhoods—and addiction. It has always reminded me of the knighted, honored and bemedaled psychiatrist in Virginia Woolf's *Mrs. Dalloway*, whose prescription for the mentally ill was treatment in quiet facilities on the moors where they were, for extended periods, out of sight and therefore not

a bother and discomfort to respectable people. The efficacy of the treatment for the patient raised some doubts, but it found great favor in the society from which the patient was excluded.

Until recently, we were in an era similar to that in mental illness where we locked up the looneys in Bedlam. We are, I believe, past that era, but how far past is open to question. Where are we, and where do we go from here?

Certainly, we are becoming more sensitive to the realities of addiction. This sensitivity finds legal expression in *Robinson v. California*, where the Supreme Court set aside the conviction of a person charged with being an addict. The Court held that addiction is a disease, and that a person can no more be criminally responsible for being an addict than for being tubercular. The status or condition of addiction cannot itself be a crime.

I do not know whether that case is more than an expression of enlightened sentiment and a changing legal climate. Possession remains a crime, and every addict possesses. Possession of a hypodermic kit is an offense, and every mainliner necessarily has such equipment. *Robinson v. California* may be illustrative of a long overdue elemental fairness and rationality; it does not, however, by itself provide direction as to how we are to proceed.

Where we go from here may be indicated by the federal government and those states which have attempted, or are attempting, to deal with narcotics problems. I have stated earlier that addicts and potential addicts are exported within our federal union. We need not, and Utah perhaps need not, get too excited about Utah's response to all this. But the legislative response of New York, of Illinois, of California, of Massachusetts, of New Jersey, of Michigan and of Pennsylvania is critical.

Compulsory civil commitment, followed by an aftercare program, is the route which a number of these states have chosen, and the federal government may choose, to follow. While commitment is not a novel concept, both its use in a larger program and

the implementation of such programs are recent. For example, Illinois has a civil commitment procedure, and has had for several years. Only during the past year has there been any use of the procedure, and even then the use has been minimal in the absence of any coherent state program.

California has had a civil commitment program since 1961, a program which has been translated into the bricks and mortar of existing and expanding hospital facilities at the California Rehabilitation Center outside Los Angeles. Its statute is typical in that it provides both for voluntary commitment and for involuntary commitment of those convicted of criminal offense, and it establishes a mandatory aftercare program as an integral part of the total effort to deal with addiction. Similar legislation has since been passed in New York, New Jersey and Massachusetts, and bills pending before Congress would establish a federal civil commitment program. Governor Rockefeller in New York has now proposed greatly increased emphasis on commitment facilities.

These various statutes and proposals differ from one another in significant respects. Some of these should be noted. For example, California requires a minimum six months confinement; in New Jersey and Massachusetts the period of hospitalization is flexible. California's program is related to the prison system; the Department of Corrections has primary responsibility. In New York the entire program is under the Department of Mental Hygiene. Massachusetts has turned to an independent Drug Addiction Rehabilitation Board.

In New Jersey the voluntary commitment procedure may be as short as thirty days. Criminal offenders are eligible for commitment only if they have been convicted as disorderly persons. Massachusetts generally permits commitment for two years of those charged with addiction-related crimes, although it merely delays the charge in some instances and requires prior conviction in others. California is considerably more restrictive than Massachusetts, requiring conviction before commitment of

those charged with crimes and excluding those convicted of certain dangerous felonies and prior narcotics offenses. Commitment is for a five-year period for misdemeanants and ten years for felons, these periods including, of course, the aftercare parole program.

All these legislative attempts to grapple with the narcotics addiction problem have certain common bases and pose a number of questions. They assume that special hospital facilities are imperative; they depend largely upon compulsory treatment; and they focus on the addict who has run afoul of the law. The questions are many: Should the emphasis be solely or largely on special facilities or should addicts be treated ordinarily in general wards of regular hospitals? How long, at a minimum, should an addict be committed to a facility prior to his release to a probationary aftercare status? How should pharmacological methods of treatment be related to these programs? What addicts, if any, should be excluded? Should commitment be restricted to those charged with possession and minor offenses, or should any addict who might benefit be permitted to elect treatment? How are expectable relapses to be handled, particularly where the addict is subject to prior criminal charges? What compulsory testing for narcotics use shall be required? Should an addict who has been treated and has demonstrated an ability to function in society without drugs be required to then stand trial for a prior addiction-related offense? The answers to these may determine whether a given program is effective and realistic and whether it adequately resolves the civil liberties problems with which this area bristles.

There is a larger question of governmental policy. Commitment is largely meaningless without comprehensive aftercare programs. Is it wise, at this time, to pledge any state almost irrevocably to a program requiring a massive expenditure for special hospital facilities without any assurance either that this is the only or best approach or that the legislative commitment to aftercare programs will continue? While

many of the questions raised above may be and can be resolved by later amendment as legislative bodies become more confident of the possibilities of rehabilitative programs and more sensitive to their implications, the answer to this last question will determine whether Illinois and other states set their course in the wake of New York and California or voyage off alone. I confess that I am troubled.

Addiction programs are experiments in the unknown. The gaps in our knowledge are vast and the diversities of professional opinion impressive. Yet we now have, at least, an exciting ferment of creative experimentation. The work of post-addicts as councilors in Puerto Rico, Synanon in California, Teen Challenge, Drug Addicts Anonymous, methadone, chemical blockage agents, urine testing, new psychiatric techniques—all open up avenues which were nonexistent yesterday. This conference is but one example of an accelerating interest and knowledge, an effort which focuses many disciplines upon a single problem.

We are on the threshold of knowledge. It would indeed be bitter if, when in the future we became able to use that knowledge effectively, we were already committed by the past to programs which could not fully utilize that knowledge. In Illinois we have a massive maximum security prison system. It is the petrification of an idea into stone, an idea which has long seen its day but which we can abandon only with great difficulty because of the governmental investment in physical and administrative institutions. Only within the past five years have we begun to turn away from our sprawling mental hospitals as proper facilities for treating our mentally ill. Let us not now compound our errors by considering addiction as a mere matter of beds, of cubic treatment space, of a more humane type of custodial care than imprisonment.

Hospital facilities are a major capital investment on the part of any state. They represent the most visible part of any treatment program. Once any state government, through its legislature, has committed itself to such facilities as *the* answer, the pattern

of custodial treatment has been set, and it is unlikely that this part of the program would be lightly abandoned.

But these facilities have limited utility unless they are part of a comprehensive effort to break the pattern of addiction. Without aftercare, without the supportive and social services to families and in neighborhoods after the commitment period is terminated, such hospitals can become at best junior-grade Lexingtons and at worst prisons with a more humane designation. A massive hospital program depends upon a continuing legislative commitment to the financial support of aftercare.

When the resources of a state are drawn thin by the needs for common schools, for colleges and universities, for highways and social welfare, it is questionable whether this support will invariably continue. It is questionable whether it will always be recognized that commitment facilities are but one building block in a larger treatment structure. It is questionable whether our states will recognize the need for devoting additional resources to alternative approaches, to other programs and to research. I am fearful that after an initial enthusiasm state legislatures may look upon the investment in facilities as a limit on state response to addiction and upon the less visible and tangible aspects of the total program as a handy area for budget slashing.

I do not mean to suggest that civil commitment legislation is unwise. But I do urge that we do not become intoxicated with the possibilities of a procedure and insist on a bed for every addict, like a pot for every chicken. Civil commitment is the gatehouse to aftercare. Legislative emphasis should be on the mobilization of our total community resources, public and private, to sustain the post-addict as a functioning member of society; it should not become overly fascinated with initial treatment.

For this reason I am less attracted to

the proposals before Congress for compulsory commitment legislation than I am to the bills for federal support for state programs. Because federal law enforcement necessarily encourages the congregation of addicts in a few states federal participation in meeting the problems of these states is both logical and equitable. And, I might add as a legislator wrestling with the problems of revenue and the allocation of limited resources, federal assistance is imperative.

I suggest that the legislative pattern for the next few years should not be a model law or a single model program, but a diversity of state, local and private programs supported in large measure with federal funds. I suggest that pharmacological approaches, group therapy, employment of post-addicts as case workers and neighborhood clinics all have a role in the immediate future, some perhaps only until our knowledge is greater and others or all perhaps on a continuing basis.

Having done nothing in the past to encourage the treatment and rehabilitation of addicts, Illinois has no investment in program or policy to warp its response. I would hope that it takes the opportunity to preserve a maximum legislative flexibility. A civil commitment procedure, with necessary facilities, should have legislative support. But it should be but one approach among others authorized and supported by the General Assembly. And I would hope that the federal government would be a partner both in formulating and supporting imaginative responses to the challenging and melancholy problem of addiction. Success in grappling with the complex problem of addiction requires strong governmental support. But governmental support which determines inalterably for the foreseeable future the avenue along which we must travel may decree the failure of that journey before it is begun.

Concluding Remarks

This conference has brought together men of diverse opinions and backgrounds but with equally worthy goals and has provided them with a forum. The common denominator sought was not found, but of great importance was the demonstration that even after direct confrontation, men of diverse opinions were able to work together and to communicate with one another towards a common goal.

The contents of this program have given rise to five task forces, led by the Illinois State Medical Society. They are as follows: public education, publication of the conference material, legislation, program study and evaluation, and program coordination. The latter is to be comprised of representatives of all the known agencies dealing with narcotics addiction or with the addicts themselves.

Some six months have elapsed since the narcotics conference and at present, there is excellent cooperation between the Illinois State Medical Society and the State Department of Mental Health and the Narcotics

Advisory Council. New legislation has been agreed upon and is to be offered to the next meeting of the Illinois General Assembly. This legislation is based on a comprehensive approach to all phases of the problem and embodies to a certain extent the goals as stated in the introduction to the conference.

A rather unique but valuable byproduct, both of the development of this conference and its aftermath, is represented in the composition of the task forces. These include not only members of the Illinois State Medical Society but many non-physician, non-members of the Society, who work closely and in harmony with one another. We are confident that in Illinois it will be possible to effect a program which will offer many different types of treatment for the many different types of drug addicts within the framework of a system which (1) provides for the proper study of the problem itself and (2) embodies suitable criteria for evaluating the results of the treatments.

Joseph H. Skom, M.D.

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Trisulfaminic continued

ADVANTAGES: The advantages of Trisulfaminic in upper respiratory infections are: palatability of suspension; freedom from narcotics or alcohol; therapeutic reliability; safety; economy; ease of administration; freedom from potential sensitization to broad-spectrum antibiotics which may be reserved for lower respiratory or other infections caused by susceptible organisms. **CONTRAINDICATIONS:** Contraindicated in sulfonamide and antihistamine sensitivity, impaired renal function, pregnancy approaching term, and in premature infants and newborn infants during the first month of life. Do not use in patients with glaucoma, prostatic hypertrophy, stenosing peptic ulcer, pyloroduodenal or bladder neck obstruction. **WARNING:** Use only after careful evaluation in patients with liver or renal damage, urinary obstruction, or blood dyscrasias. Deaths have been reported from hypersensitivity reactions with administration of sulfonamides. In intermittent or prolonged therapy, blood counts and liver and kidney function tests should be performed periodically. Sulfonamide therapy may potentiate the hypoglycemic action of sulfonylureas. **PRECAUTIONS:** Use with caution in patients with histories of significant allergy or asthma. Assure an adequate fluid intake. Because the antihistamines may cause drowsiness of varying degree, warn patients about activities requiring alertness such as driving a car or operating dangerous machinery. Use with caution in the presence of hypertension, hyperthyroidism, cardiovascular disease and diabetes. **ADVERSE REACTIONS:** As in all sulfonamide therapy, the following reactions may occur: headache, nausea, vomiting, diarrhea, icterus, hepatitis, pancreatitis, urticaria, rash, fever, cyanosis, hematuria, crystalluria, proteinuria, blood dyscrasias, petechiae, purpura, neuropathy and injection of the conjunctiva and sclera. If one or more of these reactions occur, the drug should be discontinued. With antihistaminic therapy there have been reports of sedation varying from mild drowsiness to deep sleep, dizziness, lassitude, inability to concentrate, fatigue, incoordination, tinnitus, blurred vision, diplopia, euphoria, nervousness, insomnia, tremors, palpitation, hypotension, headache, chest tightness, urinary frequency, dysuria, tingling of the hands, dryness of the mouth, throat, and nose, gastrointestinal disturbances such as epigastric distress, anorexia, nausea, vomiting, constipation and diarrhea and very rarely, leukopenia and agranulocytosis. Adverse reactions reported with the use of sympathomimetic amines include anxiety, tension, restlessness, nervousness, tremor, weakness, insomnia, headache, palpitation, tachycardia, angina, elevation of blood pressure, sweating, mydriasis, anorexia, nausea, vomiting, dizziness, constipation, and dysuria due to vesicle sphincter spasm. **PACKAGE INFORMATION:** Trisulfaminic Tablets: Supplied in bottles of 100 tablets. **CAUTION:** Federal law prohibits dispensing without prescription.

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NEW PHARMACEUTICAL SPECIALTIES

by Paul deHaen

For detailed information regarding indications, dosage, contraindications and adverse reactions, refer to the manufacturer's package insert or brochure.

Single Chemicals — Drugs not previously known, including new salts.

Duplicate Single Products—Drugs marketed by more than one manufacturer.

Combination Products — Consisting of two or more active ingredients.

New Dosage Forms — Of a previously introduced product.

NEW SINGLE CHEMICALS

LASIX Diuretic

R

Manufacturer: Hoechst Pharmaceuticals

Nonproprietary Name: Furosemide

Indications: Cardiac, hepatic, and renal edema.

Furosemide is a highly potent diuretic, effective when other diuretics have failed, producing little action on potassium excretion.

Dosage: 40 to 120 mg. daily; maximum 200 mg. daily.

Supplied as: Tablets 40 mg. Bottles of 60.

RNDOMYCIN Antibiotic—Broad and Medium Spectrum

R

Manufacturer: Pfizer Laboratories

Nonproprietary Name: Methacycline HCl.

Indications: Infections caused by susceptible strains of Gram-positive and Gram-negative organisms. Pneumonia, respiratory tract infections, genitourinary tract infections, soft tissue infections, ophthalmic infections and gastrointestinal infections.

Caution: Reduce dosage in renal impairment.

Dosage: Adults—600 mg. daily, given in divided doses.

Children—3 to 6 mg./lb. of body weight per day given in divided doses.

Supplied as: Capsules 150 mg. Bottles of 16 and 100. 300 mg. Bottles of 50

Syrup 5 mg./5cc. Bottles of 2 oz. and 16 oz.

ZYLOPRIM Antiarthritic—Gout

R

Manufacturer: Burroughs Wellcome & Co. (U.S.A.) Inc.

Nonproprietary Name: Allopurinol

Indications: Gout, either primary, or secondary to the hyperuricemia which occurs in polycythemia vera, myeloid metaplasia or other blood dyscrasias. Primary or secondary uric acid nephropathy, with or with-

PHARMACEUTICAL SPECIALTIES (Continued)

out accompanying symptoms of gout. Especially useful in gouty nephropathy, renal urate stones, and severe gouty arthritis.

Contraindications: In children except with hyperuricemia secondary to malignancy. Not to be employed in nursing mothers.

Dosage: 200 mg. to 300 mg. per day in divided doses.

Supplied as: Tablets 100 mg. Bottles of 100.

DUPLICATE SINGLE PRODUCTS

CHROMALBIN Diagnostic—Radioactive

Isotope

R

Manufacturer: E. R. Squibb & Sons

Nonproprietary Name: Radio-Chromated (Cr⁵¹) Serum Albumin (Human)

Indications: Detection and quantitation of gastrointestinal protein loss.

Dosage: 30 to 50 microcuries, intravenously

Supplied as: Sterile aqueous solution. 40 to 500 microcuries/cc.

ISOPTO TEARS Eye Preparation o-t-c

Manufacturer: Alcon Laboratories

Nonproprietary Name: Hydroxypropyl methyl-cellulose

Indications: Treatment of dry eyes.

Dosage: Topically, 1 or 2 drops in the eyes, 3 times daily or as needed.

Supplied as: Sterile ophthalmic suspension 0.5%. Drop dispensers 15 cc.

COMBINATION PRODUCTS

CONAR-A TABLETS Cold Preparation—

general

o-t-c

Manufacturer: The S. E. Massengill Co.

Composition:

Noscapine 10 mg.

Chlorpheniramine Maleate 2 mg.

Phenylephrine HCl 10 mg.

Acetaminophen 300 mg.

Glyceryl Guaiacolate 100 mg.

Indications: Temporary relief of cough, nasal congestion, minor aches and pains associated with the common cold.

Dosage: Adults: 1 tablet every 3 or 4 hours.

Children: (6-12 years) ½ tablet every 3 or 4 hours

Supplied as: Tablets. Bottle of 100

MENRIUM Hormone—Estrogen

R

Manufacturer: Roche Laboratories

Composition: Water-soluble conjugated estrogens. Chlordiazepoxide

Indications: Management of the manifestations associated with menopausal syndrome—anxiety and tension, vasomotor complaints and hormonal deficiency states.

Dosage: One tablet 3 times a day.

Supplied as: Tablets. Three strengths:

Water-soluble conjugated estrogens 0.2 mg. 0.4 mg. 0.4 mg.

Chlordiazepoxide 5.0 mg. 5.0 mg. 10 mg.

Bottles of 60 and 500

LIBRAX Antispasmodic Combination

R

Made by Roche Laboratories

available again

NEW DOSAGE FORMS

CONAR-A SUSPENSION Cold Preparation—general o-t-c

Manufacturer: The S. E. Massengill Co.

Composition: 5 cc:

Noscapine 5 mg.

Chlorpheniramine Maleate 1 mg.

Phenylephrine HCl 5 mg.

Acetaminophen 150 mg.

Glyceryl Guaiacolate 50 mg.

Indications: Temporary relief of cough, nasal congestion, minor aches and pains associated with the common cold.

Dosage: Adults: Two teaspoonsful every 3 or 4 hours.

Children: ½-1 teaspoonful every 3 or 4 hours. (6-12 years)

Supplied as: Suspension. Bottles of 16 oz.

TETANUS AND DIPHTHERIA

TOXOIDS, COMBINED,

PURUGENATED Biological

R

(For adult use)

Manufacturer: Lederle Laboratories

Nonproprietary Name: Tetanus and Toxoids Combined, Aluminum Phosphate Adsorbed.

Indications: Primary immunization of adults (and children over 8 years) against tetanus, diphtheria and for subsequent booster inoculation.

Dosage: Primary immunization: Two intramuscular injections of 0.5 cc, 4 to 6 weeks apart.

Booster dose: Intramuscular injection of 0.5 cc every 3 to 4 years.

Supplied as: Lederject disposable syringe 0.5 cc. Packages of 10

TETANUS AND DIPHTHERIA

TOXOIDS, COMBINED,

PURUGENATED Biological

R

(For pediatric use)

Manufacturer: Lederle Laboratories

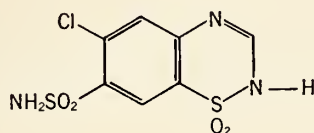
Nonproprietary Name: Tetanus and Diphtheria Toxoids Combined, Aluminum Phosphate Adsorbed.

Indications: Immunization against both tetanus and diphtheria in children less than eight years of age.

Dosage: Basic immunity: Two intramuscular injections of 0.5 cc each 4 to 6 weeks apart. Booster Dose: 0.5 cc intramuscular injection one year after completion of primary course and every four years thereafter.

Supplied as: Lederject disposable syringe 0.5 cc. Packages of 10

The first major breakthrough came with the synthesis of chlorothiazide.



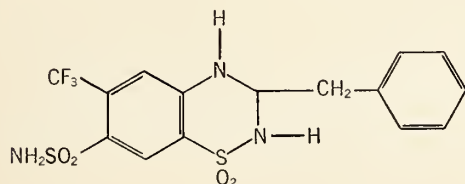
Altering the sulfonamide group did indeed alter the ability of chlorothiazide to inhibit carbonic anhydrase—it was only 1/10th as potent as acetazolamide in inhibiting the enzyme.⁹ Despite the drop in inhibitory potency, however, chlorothiazide proved to be an effective diuretic—an observation that led to the conclusion that its diuretic action was due to some mechanism other than its action on carbonic anhydrase.^{10,11}

For effective diuresis, chlorothiazide was administered in daily dosages ranging from 250 to 2000 mg.¹² It increased the excretion of sodium and chloride; and, to a lesser extent, potassium and bicarbonate.¹² The excretion of potassium appeared to be maximal at higher dose levels at which, theoretically, the carbonic anhydrase inhibitory effect is more active.¹² Its prolonged use, therefore, could sometimes result in metabolic hypokalemic, hypochloremic alkalosis.⁸

Naturetin—effective diuresis with more favorable electrolyte balance

Other thiazides followed—with improvements being aimed at two particular areas: 1. attempts to increase diuretic action in relation to the milligram potency of the drug, and 2. attempts at a more favorable sodium/potassium ratio in the urine, i.e., to decrease the excretion of potassium while maintaining the excretion of sodium.¹³

One of these, Naturetin, Squibb Bendroflumethiazide, has made advances on both these points.



“By adding a 3-benzyl radical to hydroflumethiazide a rather dramatic reduction in dose range is accomplished. With this drug, effective sodium excretion is obtained with doses between 2.5 and 10 mg., which is a 200 to 1 ratio as compared to chlorothiazide...”¹⁴

Moreover, due probably to its virtual lack of carbonic anhydrase inhibition, Naturetin (bendroflumethiazide) has been shown to cause less potassium and bicarbonate loss and less alteration in urinary pH than either chlorothiazide or hydrochlorothiazide.

Naturetin is outstandingly effective not only in establishing, but also in maintaining, excretion of retained fluid in edematous patients. And its duration of action is sufficiently prolonged to allow a single daily administration in most patients. Naturetin is also an effective antihypertensive agent.

Contraindications: Severe renal impairment; previous hypersensitivity.

Warning: Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting, or G.I. bleeding occur.

Precautions: The dosage of ganglionic blocking agents, veratrum, or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Electrolyte disturbances are possible in cirrhotic or digitalized patients.

Side Effects: Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, and rashes may occur.

Supplied: Naturetin (Squibb Bendroflumethiazide) 5 mg. and 2.5 mg. tablets. Also available Naturetin \bar{c} K [Squibb Bendroflumethiazide (5 or 2.5 mg.) with Potassium Chloride (500 mg.)]. For full information, see Product Brief.

References: 1. Southworth, H.: *Proc. Soc. Exper. Biol. & Med.* 36:58, 1937. 2. Mann, T. and Keilin, D.: *Nature* 146:164, 1940. 3. Pitts, R. F., and Alexander, R. S.: *Am. J. Physiol.* 144:239, 1945. 4. Schwartz, W. B.: *New England J. Med.* 240:173, 1949. 5. Friedberg, C. K., in Moyer, J. H., and Fuchs, M.: *Edema Mechanisms and Management*, Philadelphia, W. B. Saunders Co., 1960, p. 259. 6. Sprague, J. M., in Moyer, J. H., and Fuchs, M.: *op. cit.*, p. 179. 7. Cumming, J. R.; Tabachnick, E., and Seelig, M., in Moyer, J. H., and Fuchs, M.: *op. cit.*, p. 254. 8. Werko, L., in Moyer, J. H., and Fuchs, M.: *op. cit.*, p. 188. 9. Beyer, K. H., Jr., in Moyer, J. H., and Fuchs, M.: *op. cit.*, p. 274. 10. Maren, T. H., and Wiley, C. E.: *J. Pharmacol. & Exper. Therap.* 143:230, 1964. 11. Earley, L. E., and Orloff, J.: *Ann. Rev. Med.* 15:149, 1964. 12. Fuchs, M., and Mallin, S. R., in Moyer, J. H., and Fuchs, M.: *op. cit.*, p. 276. 13. Ford, R. V., in Moyer, J. H., and Fuchs, M.: *op. cit.*, p. 290. 14. cited in Fuchs, M., and Mallin, S. R. (ref. 12): *op. cit.*, p. 283.

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SQUIBB BENDROFLUMETHIAZIDE
to reduce excess fluid or high blood pressure



The statements in this section are solely those of the authors and do not necessarily reflect the official views of the Illinois Medical Journal.

THE MEDICAL MENOPAUSE

THE PHYSICIAN'S MENOPAUSE could be defined as the period of life when a practitioner no longer wants to assume responsibility in medical society affairs, political battles, research, teaching, learning new procedures, attending staff meetings, or accepting new patients. He is middle aged, somewhat depressed, and excuses his actions with "I've done my share, let the younger man do it."

Dr. Henry A. Davidson discusses this form of apathy in the March 21st issue of *Medical Economics*. We recommend this article to all physicians who were active at one time and now want to coast. It has serious repercussions especially among those who believe they are over the hump. Davidson interviews 15 doctors who were in their late fifties or early sixties and listed the following symptoms as characteristic of medical man's menopause. Some were depressed because the attraction of practice was catching up with them. The younger men were becoming the best surgeons or heart specialists in town. They had the

biggest practice and the senior physicians were forced to take a back seat.

The second manifestation was the difficulty in keeping up with medical progress. They envied the youngster just out of residency who was up to date on all things even though lacking in experience. Scientific articles were becoming more difficult to read or to understand. Many now preferred to chew the rag with old friends instead of attending a staff meeting in the auditorium.

The worst symptom was the tendency to withdraw or disengage self from medical life. These men were becoming more and more reluctant to attend meetings and contribute their knowledge and experience to their colleagues. They preferred to let others do the fighting for socio-economic problems that faced the medical profession. They were behaving like the ostrich and ducking important issues by burying their head in the sand of time.

Every physician over fifty should take stock of his activities and "come alive" if

(Continued on page 549)

EDITORIALS

(Continued from page 546)

he finds that his middle age spread has him stuck in a rut. There is no future in crawling into a shell, avoiding current events, and losing interest in the progress of medi-

cine. Those choosing to coast through the remaining years of life may reach it sooner than they think. Admit to obvious limitations and never lose that sense of humor. Be interested, be alive.

T. R. Van Dellen, M.D.

AUTOMATED PROCESSING

THE COMPUTER is playing an increasing role in the practice of medicine. It has not changed the physician but is changing the way patients and records are handled in hospitals. It is used extensively in research and in clinical laboratories. Most medical centers have large computer data processing centers where expensive machines process information in the form of numbers, words, pictures, sounds, or symbols at phenomenal speeds. It is beyond comprehension but we must admit that it is a godsend by making unthinkable tasks possible.

Computers can do only so much as they are programmed to do. In the near future we may have a computer system designed to diagnose disease. The logical concepts inherent in medical diagnosis emphasize the fundamental importance of considering combinations of symptoms or symptom complexes in conjunction with combinations of diseases or disease complexes. The machines seem especially suited to help the physician collect and process clinical information and remind him of diagnosis he may have overlooked. But to be successful a thinking physician must put the correct information into the computer and in all probability a thinking doctor will be the only person able to use what comes out.

Many experiments are being conducted on the role of the computer in history taking and in diagnosis. The aim is to reduce the work load of the physician by replacing the more tedious pen and paper method. This may be possible but it must again be emphasized that the computer is no better than the man who obtained the information that went into the machine. On the other hand the computer has no peer when it comes to the retention and recall of the material stored within its cards and mag-

netic tapes. It can store on one drum as much information about patients in a hospital as there are words in the *Encyclopaedia Britannica*.

The surface has fast been scratched on the use of electronic equipment in hospitals and clinics. It is predicted that computers will be able to type out a complete diet list and handle all requests for laboratory procedures and medications. When a drug is ordered the computer will tell when the last dose was given and warn of contraindications. On entering the hospital the machine will not only say hello to the physician but present him with the location and disposition of all his patients along with a summary of the latest laboratory data. The medical record will be reduced to a very small size and stored in vast quantities in smaller rooms. Many hospitals are now utilizing closed circuit TV for teaching. When the physician is making rounds he is able to contact the x-ray department and view his patient's films on the floor without going to the department. One or two way walkie talkies are replacing the bells, flashing lights, and loudspeaker systems. Telemetry allows one nurse to keep an accurate check on the pulse, blood pressure and respiration of a half dozen seriously ill patients. There is no doubt that computers, telemetry, and a variety of work saving electronic machines are taking over. As we said originally, the physician has not changed but his hospital and equipment are undergoing a revolution. Will the computer replace the physician? This is within the realm of possibility and there is no doubt that some biotelemetric engineer is not trying to do first that.

T. R. Van Dellen, M.D.



THE VIEW BOX

Leon Love, M.D.
Director, Diagnostic Radiology
Cook County Hospital



FIGURE 1

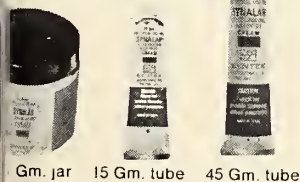
A 51-year-old Negro female presented with a chief complaint of chest pain. She had been treated for hypertension since 1959. There was no history of renal biopsy or previous trauma.

Physical examination revealed a blood pressure of 200/120. A continuous bruit was heard over the right flank posteriorly.

(continued on page 558)

f a modern orticosteroid conomy of ydrocortisone

...a choice of 3
nomical sizes



fluocinolone acetonide — an original steroid from
SYNTEX 
LABORATORIES INC., PALO ALTO, CALIF.

THE VIEW BOX

DIAGNOSIS AND DISCUSSION

(Continued from page 550)

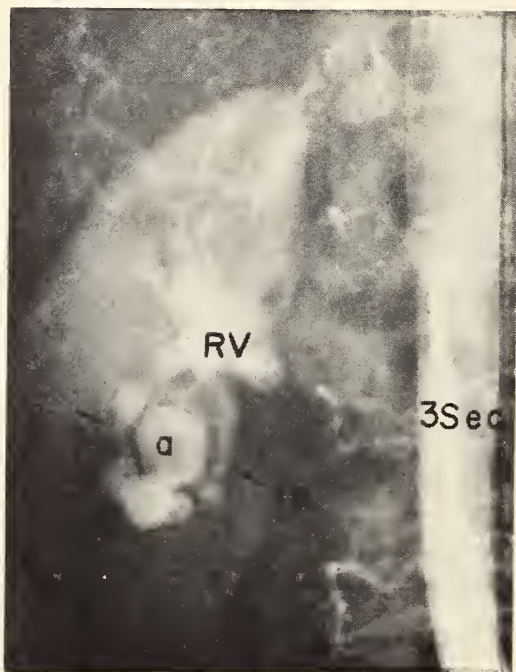


FIGURE 2

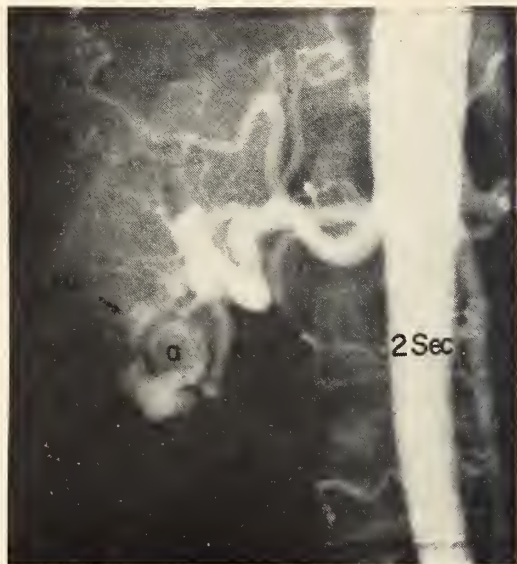


FIGURE 3

This patient has a remarkable angiographic demonstration of a renal arteriovenous fistula, which has caused a compression defect of the inferior calyces and renal pelvis, as shown on the routine pyelogram (Fig. 1). The arteriogram (Figs. 2 and 3) demonstrates the branch renal artery (ra) entering an aneurysm (a) which had ruptured into a branch of the renal vein (rv).

Rapid visualization of the renal vein during early arterial filling is the hallmark of renal arteriovenous fistula. If there is sufficient shunting of arterial blood, rapid opacification of the inferior vena cava may be seen. Our patient returned six months later, and this finding was demonstrated.

Renal arteriovenous fistulae may be ac-

companied by any of the following findings: increase in cardiac output and blood volume, decrease in circulation time, and an increase in oxygen saturation in the renal vein.

Complications are: cardiac failure as a result of hypertension, and possible gross hemorrhage.

The usual causes of renal A-V fistula are trauma (renal biopsy is a frequent offender), tumor, congenital, post-nephrectomy stump fistula, and rupture of an arterial aneurysm.

REFERENCE

Love, L., Moncada, R., and Lescher, A. J.: Renal Arteriovenous fistulae. *Amer. J. Roentgen.* 95:364-371, October 1965.

INDOCIN®

INDOMETHACIN

Indications: Chronic and acute rheumatoid arthritis, rheumatoid (ankylosing) spondylitis, degenerative joint disease (osteoarthritis) of the hip, and gout.

Contraindications: Active peptic ulcer, gastritis, regional enteritis, or ulcerative colitis. Safety in pregnancy has not been established. Not recommended for pediatric age groups.

Warning: Patients who experience dizziness, lightheadedness, or feelings of detachment on INDOCIN should be cautioned against operating motor vehicles, machinery, climbing ladders, etc. Use cautiously in patients with psychiatric disturbances, epilepsy, or parkinsonism.

Precautions and Adverse Reactions: Most commonly, headache, dizziness, lightheadedness, G.I. disturbances. The C.N.S. effects are often transient and frequently disappear with continued treatment or reduced dosage. The severity of these effects may occasionally require cessation of therapy. G.I. effects may be minimized by giving the drug with food or with antacids or immediately after meals. Ulceration of the stomach, duodenum, or small intestine has been reported and, in a few instances, severe bleeding with perforation and death. Gastrointestinal bleeding with no obvious ulcer formation has also been noted; INDOCIN should be discontinued if G.I. bleeding occurs. As a result of G.I. bleeding, some patients may manifest anemia, and for this reason periodic hemoglobin determinations are recommended. Rare reports of effects not definitely known to be attributable to INDOCIN include bleeding from the sigmoid colon (either from a diverticulum or without a known previous pathologic condition), perforation of preexisting sigmoid lesions (diverticulum, carcinoma), and hematuria. In other rare cases, a diagnosis of gastritis has been made while the drug was being given. One patient developed ulcerative colitis, and another, regional ileitis, while receiving INDOCIN; when the drug was given to patients with preexisting ulcerative colitis, there was an increase in abdominal pain. Infrequently observed side effects may include drowsiness, tinnitus, mental confusion, depression and other psychic disturbances, blurred vision, stomatitis, pruritus, edema, and hypersensitivity reactions. Slight BUN elevation, usually transient, has been seen in some patients, although the preponderance of evidence indicates that INDOCIN does not adversely affect renal function, even in patients with preexisting renal disease. Nevertheless, renal function should be checked periodically in patients on long-term therapy. Leukopenia has been seen in a few patients. Transient elevations in alkaline phosphatase, cephalin-cholesterol flocculation, and thymol turbidity tests have been observed in some patients and, rarely, elevations of SGOT values; the relationship of these changes to the drug, if any, has not been established. As with any new drug, patients should be followed carefully to detect unusual manifestations of drug sensitivity. Before prescribing or administering, read product circular with package or available on request.

Rx



Reviews

and New Products

Trancopal and Tranco-Gesic Cited For Muscle Relaxation, Pain Relief

Both Trancopal (chlormezanone) and Tranco-Gesic (chlormezanone plus aspirin) are "effective muscle relaxants and analgesics in treatment of disorders in large muscle groups," according to results of a study appearing in *Current Therapeutic Research* (8:52, 1966).

The blind, triple-crossover study was carried out in 22 patients with muscle spasm to assess the degree of pain relief, tranquilizing and muscle relaxant efficacy of the two drugs against placebo. The tests were done at St. Louis University School of Medicine by Dr. Robert M. Woolsey and colleagues. The patients' principal complaints were paravertebral neck and low back pain. Pain at rest and on movement, perceptible spasm and limitation of motion were measured subjectively and recorded daily during the nine-day trials.

The investigators note that Tranco-Gesic produced good or excellent relief in 18 of the 22 patients, and fair relief in an additional two patients. Excellent or good results were obtained in 11 patients, and fair relief in another five, treated with Trancopal.

Noting that both medications "were active and highly effective muscle relaxants and pain relievers," it appears that "the addition of aspirin to the muscle relaxant produces a combination that is somewhat more effective than chlormezanone alone," the report states.

They add that side effects "were minor and not severe enough to warrant withdrawal of medication or reduction of dosage." The most common side effect was drowsiness.

(Continued on page 562)

R Reviews and New Products

(Continued from page 561)

Both drugs are manufactured by Winthrop Laboratories.

Pregnancies Continue After Membrane Rupture in Women Receiving Massive Doses of Progestin

Medical annals contain virtually no reports of pregnant women who have been able to carry their babies to term when the fetal membranes rupture early in pregnancy. Usually, in such cases, labor occurs within 24 hours.

However, two Missouri physicians have just reported on two women whose pregnancies continued to almost seven months and to term when they received massive doses of a progestational agent, even though the membranes ruptured between the third and fourth months of pregnancy.

"One significant fact common to both of these cases was that both women received large doses of medroxyprogesterone (Provera) prior to the rupture of the membranes," according to Drs. Robert Burstein and Samuel D. Soule, Jewish Hospital and Washington University School of Medicine, St. Louis.

NegGram Favored in Treating Chronic Alkaline Cystitis

Best results in alkaline cystitis, a relatively rare chronic condition, are obtained with the antibacterial agent NegGram (nalidixic acid), according to results of a study in the *British Journal of Urology* (38:43, 1966).

Eight of 10 patients with alkaline cystitis or cancer of the bladder had symptomatic improvement after two weeks' treatment with NegGram, reports Dr. R. M. Jameson, Newcastle General Hospital, Newcastle upon Tyne, England. All 10 patients had previously failed to respond to conventional treatment with mandelic acid and ammonium chloride.

Proteus and *E. coli* were the gram-negative organisms present in the urine of the entire group of subjects. Although only

one patient was found completely symptom-free, seven had substantially less need to pass urine and less painful urination. Two patients were not helped. The eight "successes" were able to resume work and social activities without embarrassment as bladder irritability was reduced.

Dr. Jameson notes that the incidence of alkaline cystitis seems to be increasing as the result of wider use of radiation therapy. In an addendum to his published report, he points out that an additional 12 cases of alkaline cystitis were all improved following treatment with NegGram. Ten of the 12 had *proteus*-caused infections, the rest mixed infections of *proteus* and *E. coli*.

No side effects were observed in the course of treatment.

"Development of resistance of *proteus* to nalidixic acid is rare and when this occurs is eradicated by another course of therapy," the investigator says.

NegGram is manufactured by Winthrop Laboratories.

Preoperative Shave Kit

To facilitate the preoperative shave procedure, all the items needed are now available in the new single-use Seamless SHAVE PREP PAK. As a complete, convenience-packaged unit it saves time, saves storage space, saves dollars.

All components in the ingenious complete package are used during the shave prep procedure. No outer shipping and shelf-storage carton is needed. This new Shave Prep Pak has an outer container and a nested inner container which holds the other items needed for the procedure. Both containers are strong and easy to hold; both are used during the procedure—one for soapy water and the other for rinse water—and they are generous in size (17 oz.) to minimize sloshing and spilling.

The other components include a unique flip-top safety razor, pre-assembled with a quality stainless steel blade. The blade can be easily cleansed by simply flipping open the razor top. One blade lasts through the entire prep for most patients. For easy access to skin crevices without skin

(Continued on page 566)



Frankly, most antihypertensives are pretty good if you give an adequate dose. I'm looking for one with a simple regimen so that mix-ups in doses and therefore the chance of side effects are minimized.

Regroton®

chlorthalidone 50 mg., reserpine 0.25 mg.

**1 tablet daily
brings pressure down**

Advantage: Both components of Regroton are long-acting.

Average dosage: One tablet daily with breakfast.

Contraindications: History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases.

Warning: With administration of enteric-coated potassium supplements, the possibility of small bowel lesions should be kept in mind. Discontinue 2 weeks before general anesthesia, 1 week before electroshock therapy, and if depression or peptic ulcer occurs.

Precautions: Reduce dosage of concomitant antihypertensive agents by one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take particular care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. Use with caution in patients with ulcerative colitis, gallstones, or bronchial asthma.

Side effects: Nausea, vomiting, diarrhea, muscle cramps, headaches and dizziness. Potential side effects include angina pectoris, anxiety, depression, drowsiness, hyperglycemia, hyperuricemia, lassitude, leukopenia, nasal stuffiness, nightmare, purpura, urticaria, and weakness.

For full details, see the complete prescribing information.

Availability: Bottles of 100 and 1000 tablets.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

Geigy

RE-4182R

R Reviews and New Products

(Continued from page 562)

nicking, the razor has a narrow head, guide-teeth and guarded blade corners as safety features.

Also included in this new Shave Prep Pak are a presoaped sponge (lotion soap with lanolin and 2% hexachlorophene), 2 cotton-tipped swabs (3"), 5 high wet-strength absorbent towels (8x13½") and a 17x22" underpad. The towels and underpad are extra soft and highly absorbent. The generous-size underpad absorbs spilled water; it has a waterproof backing to prevent soak-through and soiling of linen.

Nursing personnel appreciate the added convenience of this new completely disposable Seamless Shave Prep Pak: It's ready-to-use, easy-to-use and clean-up after use is simplified. The safety features, disposability and high quality of the components add to patient comfort and morale, too.

IPPB Treatment

Treatment with Intermittent Positive Pressure Breathing (IPPB) and the bronchodilator Bronkospray proved very beneficial in 64 patients afflicted with the four most common chronic bronchopulmonary diseases, according to a prominent Chicago specialist, reporting in *Diseases of the Chest* (49:610, 1966).

The diseases—asthma, bronchitis, pneumonitis and emphysema—are largely similar on x-rays and in symptoms and physical findings, says Dr. Edwin R. Levine, director of the Inhalation Therapy Department, Edgewater Hospital. Treatment of each condition was generally the same at the outset.

The importance of long-term therapy is stressed by the investigator. Emphysema, particularly because of its widespread incidence in the United States, has "so com-

plex a clinical picture that the therapy must be complex likewise," he says.

Noting that bronchial and pulmonary pathology are "permanent and irreversible," Dr. Levine says "improvement depends upon treatment of complicating bronchial factors, equalization of ventilation as much as is possible and development of a more efficient type of ventilation correlated with physical activity."

All 64 patients in the four disease groups had serious dyspnea, wheezing, cough and loss of respiratory reserve. Each was given IPPB and the bronchodilator Bronkospray, which contains isoetharine, phenylephrine and thenyldiamine. It was selected because it could be continued "for long periods of time without undesirable side reactions."

Citing Bronkospray's "excellent bronchodilation without any tachycardia, nervousness or other untoward reactions," Dr. Levine adds that some emphysema patients "showed an actual slowing of heart rate following treatment.

"Some of the patients in this series have been maintained on daily doses of this drug for a period of 12 months while other patients, not included in the study, have used the drug for longer periods. The bronchodilating effect has remained and no side effects have occurred.

"We feel, therefore, that this drug may be safely and effectively used in the long term treatment necessary for the management of the patient with emphysema."

Treatment of all four diseases is long term, the author states, especially emphysema, pneumonitis and bronchitis, which have permanent pathology. While there is no pathology of the lung in chronic asthma, bronchial infection is almost always present, it is noted.

Bronkospray is manufactured by Breon Laboratories.



"All Interns are Alike"

It stands to reason. They all go through the same training; they all have to pass the same tests; they all have to measure up to the same standards; they all are underpaid, too. Therefore, all interns are alike.

That's utter nonsense, of course. But it's no more nonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more demanding. In fact, there are at least *nine specific differences* in-

volving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to stay strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all interns aren't alike, either.



ILLINOIS MEDICAL ASSISTANTS ASSOCIATION REPORT



NEW COUNTY CHAPTER WELCOMED

A new chapter was welcomed into IMAA with the addition of the Will-Grundy County Medical Assistants Association this year. This group was organized in February. It had 10 charter members and now has more than 20. As new as this chapter is, they have started with an energetic program. March was devoted to adopting a Constitution and By-Laws. In April they heard Mr. Frederick Wolf, who spoke on Credits and Collections. In May their speaker was Mr. Best of the Aesculapian Society whose subject was Medicare.

Will-Grundy chapter held their first installation banquet on June 25th at the Holiday Inn in Joliet. Mrs. Synobia Payne, President-Elect of IMAA spoke to the group on the history of IMAA and Quincy and Chicago Medical Assistant Associations—the first county chapters. Mrs. Payne was also the installing officer. The previous officers were retired. They were:

President: Bernadine Sehroba

Vice President: Florence Bend

Secretary: Cissie Moran

The new officers are:

President: Florence Bend

Vice President: Vera St. Germaine

Secretary: Eleanor Bartels

Treasurer: Carol Struthers

Miss Tony Such was named director of the Association. The advisors are Dr.

Roger Fahrner, Dr. J. F. Zamora, and Dr. Edward Svetich.

If your practice is in the Will-Grundy county area, Doctor, and your assistant is not a member of this lively new chapter, encourage her to join. Both she and you will benefit.

In areas where there are established chapters—Adams, Cook, DeKalb, DuPage, Kane, McHenry, McLean, Peoria, Sangamon, Tazewell, Vermillion, and Winnebago—won't you also encourage your medical assistant to join, Doctor? This organization is not—NOR SHALL IT EVER BE—a bargaining union. Its main purpose is to bring educational programs to its members for professional self-improvement.

Assistants employed in counties where there is no recognized medical assistants association may join as members-at-large. At the present time IMAA has members-at-large in Carroll, Christian, Crawford, Fulton, Henry, Lake, Lee, Logan, Macon, Wayne and Woodford counties.

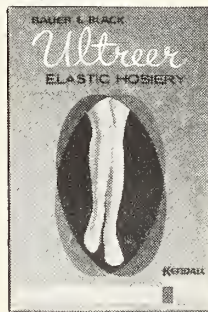
If your county has no medical assistants association, why not write to the Illinois Medical Assistants Association, 360 N. Michigan Ave., Chicago, Illinois 60601 and find out what IMAA has to offer and how to go about organizing a chapter? You'll be glad you did!

**You prescribe elastic stockings.
She won't wear them.
Now what?**

UltreerTM



Elastic Stockings so sheer they look like support hose. Both Ultrreer and support hose are sheer, shapely, cool and comfortable. But that's where the similarities end. New Ultrreer fits firmly and evenly over the entire leg. Gives true therapeutic compression necessary to relieve varicose veins and other leg disorders. They provide the therapy you prescribe. The fashion and economy she demands. Ultrreer stockings have a new low price. So low, she can afford two pairs of Ultrreer instead of one pair of regular elastic stockings. There'll be no disagreements there. Ultrreer stockings are as comforting to her purse as they are to her legs. New Ultrreer are the elastic stockings doctors and women can agree on.



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BAUER & BLACK SUPPORTS DIVISION



Awards

Arnold D. Welch, M.D., Ph.D., Professor and Chairman of the Department of Pharmacology at the Yale University School of Medicine, recently received the third Torald Sollman Award in Pharmacology at the meeting of the American Society for Pharmacology and Experimental Therapeutics.

For 22 years, Dr. Welch has been engaged in fundamental studies on the behavior of drugs in animals and man, with special interest in cancer chemotherapy. Two compounds he has developed have inhibited the growth of cancer cells.

Comprised of \$2500 and a bronze medal presented every third year, the Sollman award is sponsored by Wyeth Laboratories, Philadelphia pharmaceutical manufacturer, and was established in 1961 to commemorate the pioneer work of Dr. Torald Sollmann in pharmacology. A committee of ASPET selects the recipient. George E. Farrar, Jr., M.D., Director of Medical Services for Wyeth Laboratories, made the presentation during the ASPET meeting at Centro Medico Nacional.

In his research, Dr. Welch has studied the enzymatic reactions involved in the biosynthesis of essential metabolites. As a result of his work, several new compounds have been developed that may lead the way to control of some types of neo-

plastic disease and of certain virus infections.

Dr. Welch and his associates discovered that treatment with a new compound, 5-iododeoxyuridine, (IUdR) produces marked suppression of infections caused by at least three viruses of the deoxyribonucleic acid (DNA) -type.

The virus infections that have responded to IUdR include:

- herpes simplex keratitis, a major cause of blindness in man;
- dermal infections with vaccinia, a virus closely related to that of smallpox, and
- oncogenic infections in newborn hamsters caused by either adenovirus type 12 or polyoma.

Studies of the chemotherapy of smallpox with systematically administered IUdR are underway now in India.

Dr. Welch has served on several committees of the National Research Council, being chairman of the Committee on Growth from 1948 to 1952. Also he was chairman from 1955 to 1957 of the Panel on Pharmacology and Biochemistry and a member of the Coordinating Committee of the Cancer Chemotherapy National Service Center, United States Public Health Service. From 1956 to 1959, he was on the Research Advisory Council of the American Cancer Society.

(Continued on page 572)

SPECIAL ANNOUNCEMENT

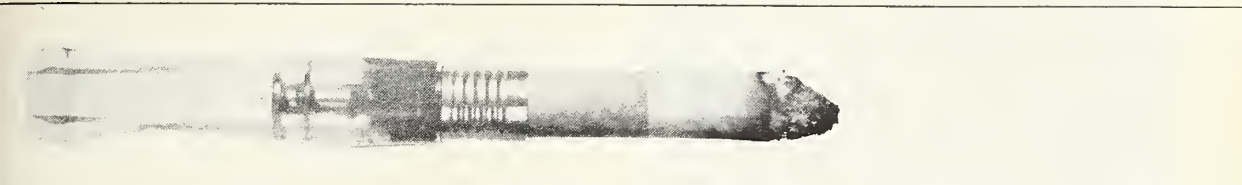
The Third Annual Meeting of the Illinois Association of the Professions will be held on Friday, October 21, 1966 at the Ambassador West Hotel. The theme "Is There a Crisis in Professionalism?", and the program itself, complete with panelists and discussion groups is designed to pre-

sent and review some of the problems facing the professions today.

Dr. Philip Crane, Professor of History at Bradley University will speak on "Professionalism: Public Protection or Self-Interest?" at the luncheon honoring the Deans of the Professional Schools in Illinois.



Before



After — tar trapped in Tar Gard after only four filter cigarettes

**Let Tar Gard help convince your patients to stop smoking
send for free professional demonstration unit.**

If your cigarette-smoking patient could only see some of the tar in cigarette smoke, it could convince him to stop smoking. Let Tar Gard help. A Tar Gard demonstration in your office might be the meaningful nudge he needs to make him quit. All you have to do is give one of the Tar Gard demonstration units to your patient — have him smoke four cigarettes through the unique* Tar Gard filter holder. When he sees the amount of tar trapped and realizes that normally this would stay in the mainstream of the smoke — the smoke he inhales — this could prove to be the most dra-

matic visual proof of the health hazards of smoking. And when your patient multiplies the amount of tar captured from four cigarettes by the related number of cigarettes he smokes over a 365 day period,** he can draw his own conclusions as to whether the smoking habit is worth the price he might have to pay.

We would like to send you a Tar Gard demonstration unit. Simply fill in the coupon (or request on your letterhead) and mail to Tar Gard, 2 Pine Street, San Francisco, California.

*Technically, Tar Gard is not a filter. It is a patented tar trapping device based on the principle of the Venturi tube, such as is employed in the bedside respirator used in critical respiratory management, the vaporizer and the aspirator. In Tar Gard, as cigarette smoke is inhaled, the pressure energy of the tar-filled smoke is accelerated (to approximately 200 mph) and then stopped abruptly by an impingement barrier, where tars are trapped.

**In an independent study carried out by Curtis and Tompkins, Ltd., Analytical Chemists, San Francisco, it was recorded that over a one year period, using 20 cigarettes per day as a base, the average amount of tar trapped in Tar Gard was 0.29 lb. (high temperature tars)

Tar Gard Company, 2 Pine St., San Francisco, Calif. 94111

Please send me Tar Gard Professional Demonstration Unit.

NAME _____

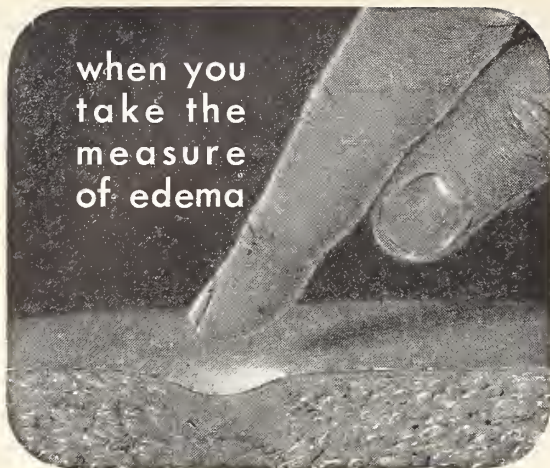
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TAR GARD



when you
take the
measure
of edema

... introduce your patient to

AQUATAG®
(BENZTHIAZIDE)

AQUATAG (Benzthiazide) is a potent, orally active, nonmercurial, diuretic agent. It is effective orally in producing diuresis in edema states, where it is therapeutically comparable to mercurials given parenterally. AQUATAG (Benzthiazide) is mildly antihypertensive in its own right and enhances the action of other antihypertensive drugs when used in combination.

DIURETIC ACTION: Clinically, the oral administration of AQUATAG (benzthiazide) results in diuretic activity within two hours with maximal natriuretic, chloruretic, and diuretic effects occurring during the fourth, fifth and sixth hours. Maintenance of response continues for approximately 12 to 16 hours. Acidosis is an unlikely complication since therapeutic doses of AQUATAG (benzthiazide) do not appreciably increase bicarbonate excretion. Edematous patients receiving 50 mg. of AQUATAG (benzthiazide) daily for five days developed a maximal increase in the rate of sodium excretion on the first day, and maintained this high rate until depletion of excessive body stores of sodium. In congestive heart-failure patients, AQUATAG (benzthiazide) produced the same weight loss, during a 48-hour treatment period as did a maximally effective dose of hydrochlorothiazide.

DOSAGE: Diuresis, initially 50 to 200 mg.; maintenance 25 to 150 mg., daily. Hypertension 50 to 100 mg. initially, adjusted to 50 mg. t.i.d. or downward to minimal effective dosage level.

WARNINGS: Use with caution in the presence of renal disease as azotemia may be precipitated or increased. In patients with advanced hepatic disease, electrolyte imbalance may result in hepatic coma. Dosage of coadministered antihypertensive agents should be reduced by at least 50%. In cases of suspected electrolyte imbalance, serum electrolyte determinations should be performed and imbalance, if any, corrected. Stenosis or ulcer of small intestine have been reported with coated potassium formulas, and surgery has been required and deaths have occurred. Based on surveys of both United States and foreign physicians, incidence of these lesions is low and a causal relationship in man has not been definitely established. Until further experience has been obtained, the use of the drug in pregnant patients should be weighed against possible hazards to the fetus.

CONTRAINDICATIONS: AQUATAG (benzthiazide) is contraindicated in progressive renal disease or dysfunction including increasing oliguria and azotemia. Continued administration of this drug is contraindicated in patients who show no response to its diuretic or antihypertensive properties. Severe hepatic disease is a relative contraindication. (See "Warnings" above.)

PRECAUTIONS AND SIDE EFFECTS: Electrolyte imbalance with hypokalemia (digitalis toxicity may be precipitated), hypochloremic alkalosis and hyponatremia may occur. Patients with cirrhosis should be observed for impending hepatic coma and hypokalemia. Other reactions may include blood dyscrasias, hyperuricemia and gout, nausea, jaundice, anorexia, vomiting, diarrhea, dizziness, paresthesia, photosensitivity and headache. Hepatic tetor, tremor, confusion and drowsiness are signs of impending pre coma and coma in patients with cirrhosis. Insulin requirements may be altered in diabetes. AQUATAG (benzthiazide) should be used with caution post-operatively as hypokalemia is not uncommon. Potassium supplementation may be advisable pre- and post-operatively. There have been occasional reports of thrombocytopenia, leukopenia, agranulocytosis, aplastic anemia and precipitation of acute pancreatitis or jaundice.

Before prescribing or administering, read the package insert or file card available on request. Available as 25 or 50 mg. scored tablets. Request clinical samples and literature on your letterhead.



**S.J. TUTAG
& COMPANY**

Detroit, Michigan 48234

NEWS and ANNOUNCEMENTS

(Continued from page 570)

New Society

The Society for Cryo-ophthalmology has been formed to promote investigative and clinical applications of low-temperature techniques to the eye. Applications for membership will be welcomed from those interested in the investigative aspects of this subject, the preservation of ocular tissue, therapeutic applications of cryogenics to various ocular diseases, and cryosurgical techniques. It is contemplated that scientific meetings will be held immediately prior to the annual sessions of the American Academy of Ophthalmology and Otolaryngology.

Inquiries and applications should be addressed to Dr. John G. Bellows, 30 N. Michigan Blvd., Chicago, 60602.

Seminars

Children's Hospital, Denver, will sponsor a series of in-depth seminars on the newborn at the Aspen Institute for Humanistic Studies on February 5, 6, and 7, 1967. Participants will include Heinz Eichenwald, M.D., University of Texas; George Kerr, M.D., University of Wisconsin; Lula Lubehenco, M.D., University of Colorado; Jerold Lucey, M.D., University of Vermont, and Robert Usher, M.D., Royal Victoria Hospital, Montreal.

Registration limited. Fee \$40.00. Write: Joseph Butterfield, M.D., Children's Hospital, 19th Avenue at Downing, Denver, Colorado 80218.

Emanuel Friedman Lecture

Edward A. Mortimer, M.D., Professor of Pediatrics at the University of New Mexico, will give the Emanuel Friedman Lecture at Children's Hospital, Denver on February 16, 1967.

The lecture memorializes a pioneer pediatrician in Colorado and is part of a two-day program which will be focused on "Infection, 1967."

For further information write: Joseph Butterfield, M.D., Children's Hospital, 19th Avenue at Downing, Denver, Colorado 80218.

To meet the growing need for further training and experience in the areas of psychiatric diagnosis and treatment for general practitioners and physicians other than psychiatric specialists, basic and advanced courses will again be offered by the Department of Psychiatry and Neurology of The Chicago Medical School.

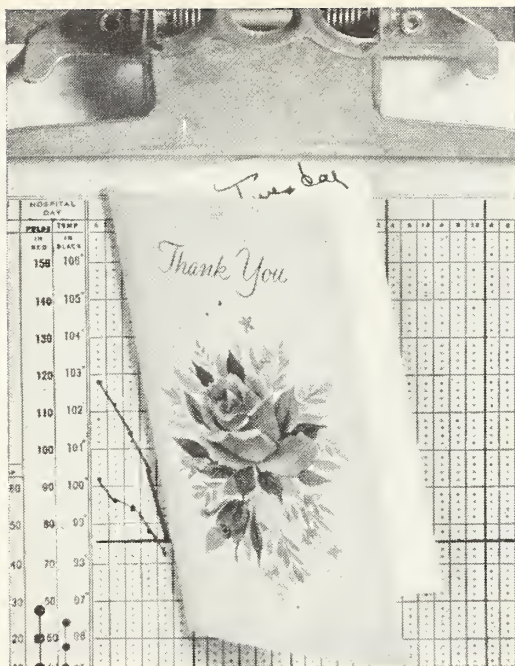
The aim of the post-graduate program is to increase the skills of the physician in the diagnosis and treatment of his general patient case load and in the management of the psychiatric problems which require limited goal therapy.

Why do today's teenagers rebel? How can the family doctor reach them when their parents often can't? "The Angry Adolescent," a frank exploration of why "kids do what they do," was one of the highlights awaiting family doctors attending the first fall Scientific Assembly of the American Academy of General Practice, October 10-13 in Boston.

Sharing the Assembly spotlight with the adolescence panel were other "in-depth" discussions on such timely topics as stroke, obstetrics and mental retardation, heart disease, and two half-days of bedside refresher courses at Massachusetts General and 13 other hospitals.

The big postgraduate educational meeting, which annually draws some 3,000 family doctors from throughout the United States, was the first major medical gathering in Boston's new War Memorial Auditorium and the first national Academy Scientific Assembly in New England. The 4-day program presented 31 medical authorities and some 115 scientific exhibits keyed to the program. The scientific program followed the annual meeting of the Academy's policy-making Congress of Delegates October 8-10 in the Sheraton Boston Hotel which adjoins the auditorium.

Leading the Monday opener on adolescent problems was Dr. Maynard I. Shapiro, chairman of the Academy's Commission on Education. Dr. Shapiro, of Chicago, directed a battery of medical and lay experts including Judge Leo B. Blessing, New Orleans, judge of the Orleans Parish Juvenile Court, and juvenile medicine expert Dr. J. Roswell Gallagher.



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1. Date of filing: September 30, 1966.
2. Title of publication: Illinois Medical Journal
3. Frequency of issue: Monthly.
4. Location of known office of publication: 360 North Michigan Avenue, Chicago, Illinois 60601.
5. Location of the headquarters or general business offices of the publishers (Not printers): 360 North Michigan Avenue, Chicago, Illinois 60601.
6. Names and addresses of publisher, editor, and managing editor: Publisher: A. G. Boeck, Jr., 360 North Michigan Avenue, Chicago, Illinois 60601. Editor: T. R. Van Dellen, M.D., 360 North Michigan Avenue, Chicago, Ill. 60601. Managing editor: John A. Kinney, 360 North Michigan Avenue, Chicago, Illinois 60601.
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	Average No. copies each issue during preceding 12 months		Single issue nearest to filing date
	11,700		11,800 (Sept. '66)
A. Total no. copies printed (Net press run)			
B. Paid circulation			
1. Sales through dealers and carriers, street vendors and counter sales	none	none	
2. Mail subscriptions	10,705	10,968	
C. Total paid circulation	10,705	10,968	
D. Free distribution (including samples) by mail, carrier or other means	735	620	
E. Total distribution (Sum of C and D)	11,440	11,588	
F. Office use, left-over, unaccounted, spoiled after printing	260	212	
G. Total (Sum of E & F—should equal net press run shown in A)	11,700	11,800	

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OBITUARIES

Simon H. Ash*, Chicago, died September 1, aged 75. A graduate of Loyola University School of Medicine in 1918, he was a member of the Chicago Board of Health for 35 years.

Eugene W. Black*, Indiana, formerly of Blue Island, died August 16, aged 54. A graduate of the University of Nebraska College of Medicine in 1939, he specialized in pediatrics.

Charles P. Blair*, Monmouth, died September 18, aged 82. A graduate of the University of Illinois College of Medicine in 1912, Dr. Blair was a member of the Illinois State Medical Society's 50 Year Club and served as chairman of the Board of Trustees from 1950 to 1952. Also a member of The Warren County Medical Society since 1914, he held the offices of secretary-and-treasurer, chairman of the Committee for the Crippled Children's Club, director of the Medical Library, and chairman of the Committee for Revision of Constitution and By-Laws. Other memberships included the Mississippi Valley Medical Society, the Illinois Radiological Society, the Monmouth Physicians' Club, and the American Fracture Association. Dr. Blair also served as chairman of the Warren County Chapter of the National Foundation for Infantile Paralysis, was a member of the Medical Examiner Board of the State of Illinois from 1947 to 1949, and served on the Board of Education of the Monmouth public schools from October, 1918 to April, 1947.

John E. Bohan*, Alexis, died August 31, aged 54. A graduate of Rush Medical College in 1937, he was president of the Mercer County Medical Society. He was a member of the Mercer County Board of Health and the Warren County Medical Society.

James W. Clark*, Chicago, died June 29, aged 60. He was a graduate of Northwestern University Medical School in 1931.

Morgan G. Cutler, Princeville, died April 1, aged 82. He was a graduate of the Hahnemann Medical College in 1907.

Edward L. Hayes*, St. Anne, died August 21, aged 50. A graduate of the University of Illinois College of Medicine in 1943, he was past president of the Kankakee County Medical Society. He was on the staff of St. Mary's and Riverside hospitals.

Fred K. James, Chicago, died May 8, aged 96. He was a graduate of the Chicago College of Medicine & Surgery in 1913. He was a member of the 50 Year Club of ISMS.

Lester K. Leserman, Chicago, died May 20, aged 59. He was a graduate of Rush Medical College in 1932.

Edward W. Logman*, Aurora, died September 8, aged 59. A graduate of Loyola University Medical School in 1936, he was a staff member of St. Charles, St. Joseph's and Mercy hospitals.

Elleonore de Tourisse Murphy, Henry, died February 7, aged 83. She was a graduate of Chicago Medical School in 1926.

Paul G. Pomeroy, Midlothian, died August 12, aged 74. A graduate of Bennett Medical College in 1914, he was a staff member of St. Francis hospital.

Claude H. Potts, Jr.*, Beardstown, died May 24, aged 48. He was a graduate of the University of Minnesota Medical School in 1943.

John J. Tingler*, Chicago, died June 9, aged 70. He was a graduate of Loyola University Medical School in 1921.

Robert W. Tuttle*, Chicago, died May 23, aged 34. A graduate of the University of Illinois College of Medicine in 1956, he specialized in radiology.

David B. Witt, Chicago, died March 8, aged 72. He was a graduate of Columbia Physicians & Surgeons in 1919.

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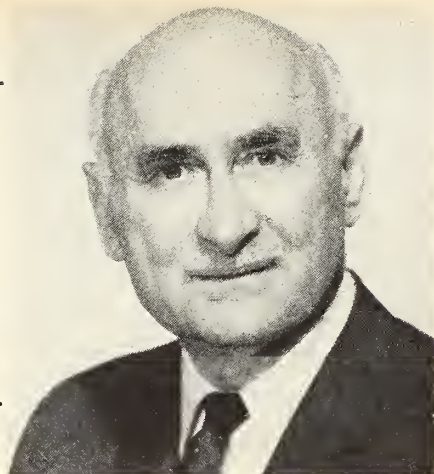
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The president's page



Caesar Portes, M.D.

MEDICINE MUST REPLY!

Doctors are being criticized in the daily press, in the weekly magazines, on the air and on television. Medicine seems to be the scapegoat. While most patients profess esteem for their own doctors, many people have become more critical of the profession as a whole and especially of the AMA. They seem to view the physician now as something less than an individual on a pedestal.

In the best selling book, "The Interns," the mysterious Doctor X claimed that doctors learn only by committing "colossal blunders" that sometimes prove fatal. So far this has gone unanswered. Why?

A more positive action program is indicated in order to answer some of the criticisms made of the profession. I propose that we study more carefully ways and means to tell our story to the press and to other media of communications. We must reply to all of these accusations; if we do not, it means that we acquiesce and accept them as the truth.

For example, *Look* magazine of June 1966 carried a big headlined article, "Hospital Bills—Why Some Patients Pay Too Much." It accuses hospitals of padding patients' bills to recoup losses caused by failure of some people to pay their bills and to cover the cost of free care given to patients who cannot afford to pay. This must be answered. We must not sit back and accept this as fact. There is no such thing as padding bills. The patient receives a statement and if there is any error in the

statement, this, of course, should be corrected. Hospitals are not-for-profit organizations and are not here just for the sake of making money. They are here to serve the public the same way as the doctor who serves on the staff of the hospital.

Another article, also in *Look* magazine of March 1966, is entitled "Dirt, Infection, Error and Negligence—the Hidden Death Threats in Our Hospitals." Now, how can we sit back and accept this without making replies? We must address the public, we must make comments in the news media, we must tell the truth about our profession. The modern, up-to-date hospital is maintained in such fashion that dirt and infection are under control. We have Infections Committees, of which hospital housekeepers are members. Every critical area is examined monthly. Cultures are taken to be sure that infection is not present, and if present, is taken care of immediately. Hospital infection rates have gone down considerably and death lessened because of the care that is being given in that particular area.

As to error and negligence, this too is a false accusation. Errors may occur. But they certainly occur to a minimum. We are all human beings. All the nurses are being supervised very carefully to be sure that proper medication is being given and that no patient is neglected and that the best of

(continued on page 595)



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THE PRESIDENT'S PAGE

(continued from page 587)

medical care and nursing care are provided.

Again, the accusation is made that many surgeons do unnecessary surgery. This is certainly a very false accusation. The public must be aware that every hospital has in its structure of the medical staff committees which function and are responsible to the staff and to the Board of Governors of the hospital. We have, for example, the surgical department which reviews the cases, all the complicated cases, all the interesting cases, all the deaths. Autopsies are being performed as much as possible, with the consent, of course, of the family involved. The purpose of the autopsy is to determine what the cause of death was and to learn from this case. The tissue committee reviews all the tissue that has been sent to the pathologist. The pathologist's report is placed on the chart, which is carefully scrutinized by the tissue committee, the record committee and the audit committee. They make sure that the diagnosis is adequate and that surgery was indicated. No surgeon is permitted to remove a normal organ. If it is found that it has been done, it is only because of the fact that the symptoms were present. For example: a patient is brought in complaining of severe pain and tenderness in the right lower quadrant with some nausea, vomiting and slight elevation of temperature. Blood count within normal limits. Nevertheless, the symptoms point toward a possible acute appendicitis. In this case the doctor is justified in doing surgery. Many times it is better to take out a normal appendix than to permit that appendix to rupture and thus probably cause a death. However, if this same surgeon is found to take out two or three normal appendices, he is called on this by the tissue committee and of course must explain.

I wish I had the time and the space to cite many more of these accusations from the different news media. I would be willing to say that we could be able to refute all of these charges. We must refute them, because otherwise the public won't know the truth.

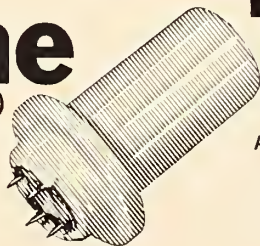
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ABSTRACTS OF BOARD ACTIONS

MEETINGS OF OCTOBER 15-16, 1966

NOTE: Members of the ISMS House of Delegates and officers of county medical societies receive the detailed minutes of Board meetings. No attempt is made in these abstracts to cover all actions of the Board—only the more important ones of general interest to the profession.

MEDICAL CARE OF INDIGENTS

The Illinois State Medical Society Board of Trustees has directed the Committee on Legislation to promote a bill in the next session of the General Assembly providing for the medical care of indigents under the Illinois Department of Public Health. The move is in accordance with recommendations of the American Medical Association being followed in several other states. In Illinois, the Department of Public Aid is geared to administer the medical care of indigents program under Title XIX of the Medicare Act.

ETHICAL RELATIONS COMMITTEE COMMENDED

By official action, the Board of Trustees has commended the Eighth District Ethical Relations Committee for its investigation of unethical conduct charges brought by pharmacists against the Weber Clinic in Olney. The District Committee, consisting of Dr. Mack Hollowell, chairman, Dr. E. A. Fahnestock and Dr. Alan Taylor, presented the board with a voluminous report of its investigation, which resulted in the clinic's being cleared of all charges of unethical conduct. Dr. Arthur F. Good-year, Board Chairman, commented that "this is a perfect example of what a district committee can do."

DR. HOPKINS HONORED

Dr. Percy Hopkins, retired chairman of the American Medical Association Board of Trustees, was the guest of honor at a dinner preceding the Oct. 15 meeting of the ISMS Board.

CHANGE NAME OF DRUG MANUAL COMMITTEE

The name of the Committee on Drug Manual has been changed to Committee on Drugs and Therapeutics to more adequately reflect the function of the committee.

DOUGLAS AMENDMENT OPPOSED

The Board of Trustees will support the Pharmaceutical Manufacturers Association and other groups opposing Senator Paul Douglas' amendment to the Medicare Law which provides for prescription drug reimbursement based on the lowest priced generic drug plus a professional fee. The Board action followed a report of the Committee on Drugs which stated that the proposed amendment does not give consideration to the wide variation in quality or standardization that exists among generic drugs, and the committee feels the program would restrict the physician in providing his patients with high quality medical care.

BANK CREDIT CARDS

The Board voted to consider use of bank credit cards in payment of medical bills as "tentatively ethical" until experience may indicate otherwise.

ABSTRACTS OF BOARD ACTIONS

MEETINGS OF OCTOBER 15-16, 1966

(continued from preceding page)

ECONOMIC COMMUNICATIONS ADDED TO P.R. DUTIES

It was reported to the Board that Walter Livingston, who has resigned his position as Director of Economics and Insurance for the Illinois State Medical Society, would continue to serve the Society as a consultant and ex-officio member of several committees with which he has been working for the past six years. In recognition of his distinguished service to the Society, the Board presented Livingston with a plaque of appreciation before he left to begin his new duties with the Rehabilitation Institute of Chicago.

Executive Administrator Robert L. Richards announced that in order to increase the effectiveness of communications interpreting the impact of government programs on the practice of medicine, all committees previously assigned to Mr. Livingston are being transferred to Mr. James Slawny, whose department will become the Division of Public Relations and Economics.

REFRESHER COURSES FOR PHYSICIANS ENDORSED

The ISMS Board of Trustees has endorsed a program proposed by the Illinois Department of Mental Health to prepare doctors now operating on limited licenses to pass examinations leading to full licensure. The program consists of refresher courses for doctors who have failed the test repeatedly and for those who have come from other states with a long history of examination failure. It was reported that the medical schools would not sponsor such courses but would publicize the need for volunteer instructors.

CONFERENCE ON ABORTION SUGGESTED

The Board approved a Legislative Committee recommendation that the Illinois State Medical Society take the lead in sponsoring a conference of knowledgeable groups interested in passage of legislation to create a commission for the study of abortion problems.

HEALTH CAREERS COUNCIL REQUESTS FUNDS

Dr. Allison L. Burdick, Jr., appeared before the Board of Trustees to request a \$20,000 contribution for the Health Careers Council. The trustees expressed great interest in the aims and purposes of the Health Careers Council, but because of severe budget limitations were unable to provide a contribution of this size. The request will be referred to the 1967 House of Delegates.

UTILIZATION REVIEW COMMITTEES

At the request of both the Committee on Prepayment Plans and Organizations and the Committee on Aging, the Board has officially recommended that physicians serve on utilization review committees of extended care facilities. The Board also concurred in action taken by the American Medical Association endorsing the "Doctrine of Individual Responsibility," which sets forth the general concept that a third party vendor program shall be rejected in favor of direct billing.



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Cellular Aspects of Aging: A Review

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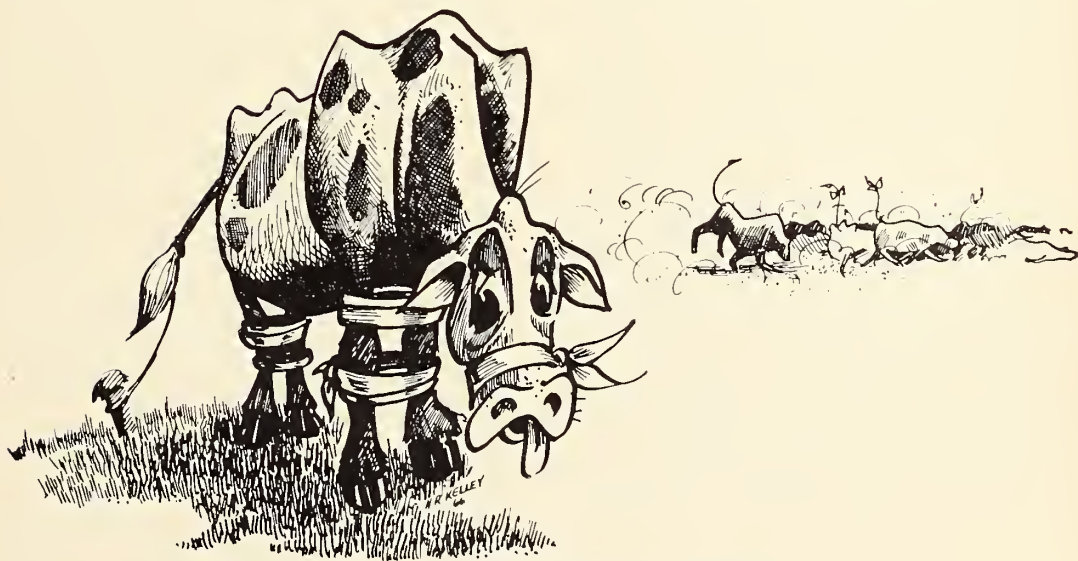


FIGURE 1. Histone Binding—An artist's impression of increased histone binding in bovine DNA resulting in decreased activity.

**THIS PAPER IS DEDICATED TO THOMAS PARR,
WHO REPUTEDLY COMMITTED A SEXUAL OFFENSE
AT 102, MARRIED WITH "COMPLETE MARITAL
BLISS" AT 120, AND DIED IN 1639 AT THE AGE
OF 152—THE AUTOPSY BEING DONE BY NONE
OTHER THAN WILLIAM HARVEY.¹**

*Thus, all the days of Methuselah were
nine hundred and sixty nine years, and he
died.* Genesis 5:27.

Introduction

AGING IS A PROCESS of changes in an organism occurring with the passage of time and resulting in a gradual increase in the probability of death.² In general, any alteration attributable to aging must occur in the most advantageous environment and should meet the following criteria suggested by Strehler:³

1. The aging process must be *universal*, occurring in all members of a given species.
2. It must be *intrinsic* and not a universal environmental effect.
3. The changes must be *progressive* over the lifetime of the organism.
4. Since the probability of death increases with age, the changes must be *deleterious* to any given member of the species.

Man's interest in the aging process is undoubtedly multiple. As with any natural phenomenon, it has intrinsic fascination for the scientist. In addition, the effects of a discovery leading to the prevention of aging are unfathomable, certainly exceeding any alterations produced by a cure for cancer or cardio-vascular disease. Finally, and perhaps most important, there is man's awareness of his personal involvement in the process he is seeking to understand.

As of 1963 there "were at least 120 theories of aging receiving serious study" and no, or at least very little, agreement about the causes of the observed cellular changes.¹ This paper presents first the

cellular alterations observed with age, followed by a presentation of four of the currently more favored theories concerning the genesis of these changes. For the most part, the importance of the interrelations of the various organs and tissue systems has not been mentioned and the emphasis has been upon subcellular changes. Several theories concerning aging which are plausible and provocative, yet nevertheless presuppose a still more basic lesion, have been omitted. The autoimmune theory of aging, for example, not only fails to account for aging in organisms with no immune systems but also requires an explanation of the lesion causing the alteration in antigen or antibody formation.⁴ In addition it should be recognized that it is unlikely that any one of the mechanisms discussed below, or any other, is the sole explanation. The major attempt, rather, has been "to assess the relative contributions of each of these processes and the detailed specific mechanisms of their occurrence."⁵

Cellular Morphological Alterations

Before attempting any effort at discussing a "process" of aging, a review of changes seen at the cellular level is presented. From a study of autopsy specimens, Tauchi reported that the number of parenchymal cells declines with age, that cell size and staining properties become more irregular, and that the numbers of binuclear cells increase with the age of the subject.⁶ The idea that these changes correlate with the age and degree of differentiation of the cell is suggested by Andrew.⁷ Studying the Purkinje cell, the hepatic parenchymal cell, and the intestinal epithelial cell in mice, he reported a distinct

gradation in histological change from the "irreversibly postmitotic" neuron to the rapidly replaced intestinal cell. The typical youthful neuron with diffusely basophilic cytoplasm, conspicuous organelles, and well-defined only focally basophilic nucleus contrasted sharply with the "senile" cell with scanty Nissl substance, a nucleus marred by variable, irregular clumps of dense basophilia, and a cytoplasm "rather remarkable by the relative lack of formed structures, including mitochondria." The liver cells, although retaining the typical tissue appearance with age, showed an increased number of binuclear forms, cytoplasmic invaginations of the nucleus, and nuclear inclusion bodies, the last being masses of cytoplasm pinched off from the invagination.⁸ The intestinal epithelium, a tissue of continual turn-over and short cellular life span, revealed no changes in general histologic appearance, mitochondria, or microvilli.⁷ The conclusion has thus been drawn that it is the post-mitotic cell which best presents histological evidence of aging, and the majority of work in the field has followed this line.

The electron-micrograph studies of aging are often conflicting. Bondareff points out that the aging process has been attributed to virtually every cytoplasmic organelle. Swelling, vacuolization, and cristae disruption of the mitochondria, hyper- and hypochromidia of the Nissl substance, and fragmentation of the Golgi complex have all been reported.⁹ Therefore, until more definitive and universal procedures are accepted, electron-microscopic study of cellular organelles will have to be considered with caution.

Unlike the conflicting reports from electron-microscope studies, the one universally accepted observation is the deposition of age-pigment. As early as 1887 Eisig observed the phenomena in Capitellid worms in the Bay of Naples.¹⁰ Today it is generally accepted that the so-called lipofuscin pigment appears with increasing age in the liver, heart, and nervous system.⁹⁻¹² Although generally correlated with aging, small amounts in the tissue of chil-

dren have been reported.¹²

A number of staining and biochemical characteristics of this substance have been determined. Lipofuscin is:

1. Positive in reactions for phospholipid.
2. Stained black by osmium tetroxide and by Sudan black.
3. PAS positive.
4. Not decolorized by alcohol or acetone.
5. Acid-fast.
6. Strongly basophilic.
7. Fluorescent with a bright yellow-orange color.
8. Positive in tests for non-specific esterases, acid phosphatases, pterins, and cathepsins.

The origin of lipofuscin, however, remains in doubt and has been attributed to nearly every cellular organelle. Einarson reported irreversible increases in pigment in Vitamin E deficient monkeys, thereby relating lipofuscin to the mitochondria,¹³ while Bondareff found decreased cellular migration of the Golgi complex with increasing pigmentation and therefore suggested a possible Golgi apparatus origin.⁹ In addition, the presence of a diaphorase in some lipofuscin granules indicates a relation with the endoplasmic reticulum, and the correlation between lipofuscin and acid phosphatase mentioned above suggests the possibility of a lysosomal origin.¹² The ambiguities surrounding this universally seen, age-correlated pigment phenomenon will need to be elucidated by future experiments.

To summarize, the most commonly observed and accepted morphological changes correlated with increased age are as follows:

1. The nucleus becomes more irregular in size, shape, and staining properties and shows included masses of cytoplasm.
2. Some mitochondria, but not all, of a given cell become swollen, vacuolized and have blunted cristae.
3. Age-pigment, or lipofuscin, accumulates.

Nuclear Involvement

Determining the extent and importance of nuclear involvement in aging is a three

step process. First, it is necessary to show that there is some good evidence implicating the nucleus; second, one must observe nuclear alterations which coincide with aging; and third, it is necessary to demonstrate a mechanism that satisfies the first two criteria.

Good evidence suggesting that the nucleus is the primary site of aging emanates from studies showing that life span is inherited and from life span studies of homozygote and heterozygote twins as compared with each other and the general population. The observation that life span differences in the three groups are 3, 6, and 10 years, respectively, although not devoid of environmental influences, is strong evidence that the cell nucleus is the progenitor of at least some of the major changes which result in aging.

The next step is to observe cellular alterations which correspond in time with aging. In addition to the morphological observations enumerated above, the incidence of visual chromosomal aberrations as well as the incidence of cells with an excess or deficiency of chromosomes has been observed to increase with age.^{16, 17} Furthermore, nuclear mutations in non-dividing cells have been demonstrated,¹⁸ an important observation when considering the marked morphological changes observed in post-mitotic cells. Recent experiments on RNA, a primary nuclear product, show quantitatively an increase in the cellular RNA in visceral and muscle tissues and qualitatively a decline in activity and an alteration of nucleotide levels.^{15, 19, 20} While the quantity of DNA does not seem to change, qualitative changes are suggested by increasing sodium pyrophosphate extraction, viscosity alterations and increasing thermal stability with age.^{15, 21, 22}

The above observations demonstrate well the occurrence of nuclear alterations with age. It remains, however, to account for the mechanism of these alterations and to show a causal relation to the aging process. The remainder of the paper is devoted to four theories concerning the origin of aging. These four have been selected be-

cause of their importance in the literature and because they seemed most likely to be pertinent to future investigation.

Histone Binding

Histones are basic nucleoproteins rich in arginine and/or lysine which are loosely and reversibly bound to DNA by means of ionic linkages between the anionic DNA phosphates and cationic amino acid groups. Experiments showing an inverse relation between the amount of histone bound to DNA and the amount of RNA synthesis suggest that the portion of DNA complexed with histone is inactive, and thereby makes histone the most likely substance serving as the operator in the Jacob and Monod model for regulation of gene action. DNA function, then, is highly dependent upon the quantity and quality of histone in the cell nucleus.^{15, 23, 25}

Von Hahn observed that thymus gland DNA from old cows denatures at a higher temperature than that from younger cows and that rigorously removing the histones from the DNA removes this difference. From this, he suggested that the histone-DNA binding progressively alters with age and therefore might be a cause of cellular aging.^{21, 22} In more recent experiments, he found that denatured DNA from old and young cows renature at the same rate, thereby removing the possibility that a covalent bond causes the increased thermal stability, since one would expect the renaturation process to be facilitated by a covalent linkage between DNA strands. In addition, he observed a general increase in the amount of histone with age. Examination of his data, however, showed no significant correlation between thermal denaturation and nuclear histone concentration; so the effect is not quantitative.^{25, 27}

Since the results are not explained by covalent bonds or quantitative histone changes, Von Hahn explained his results by postulating "an increased and firmer binding of histone to DNA with advancing age."²⁷ Since arginine-rich histones bind more firmly to DNA than lysine-rich histones,²³ it is possible that an increase of the former at the expense of the latter

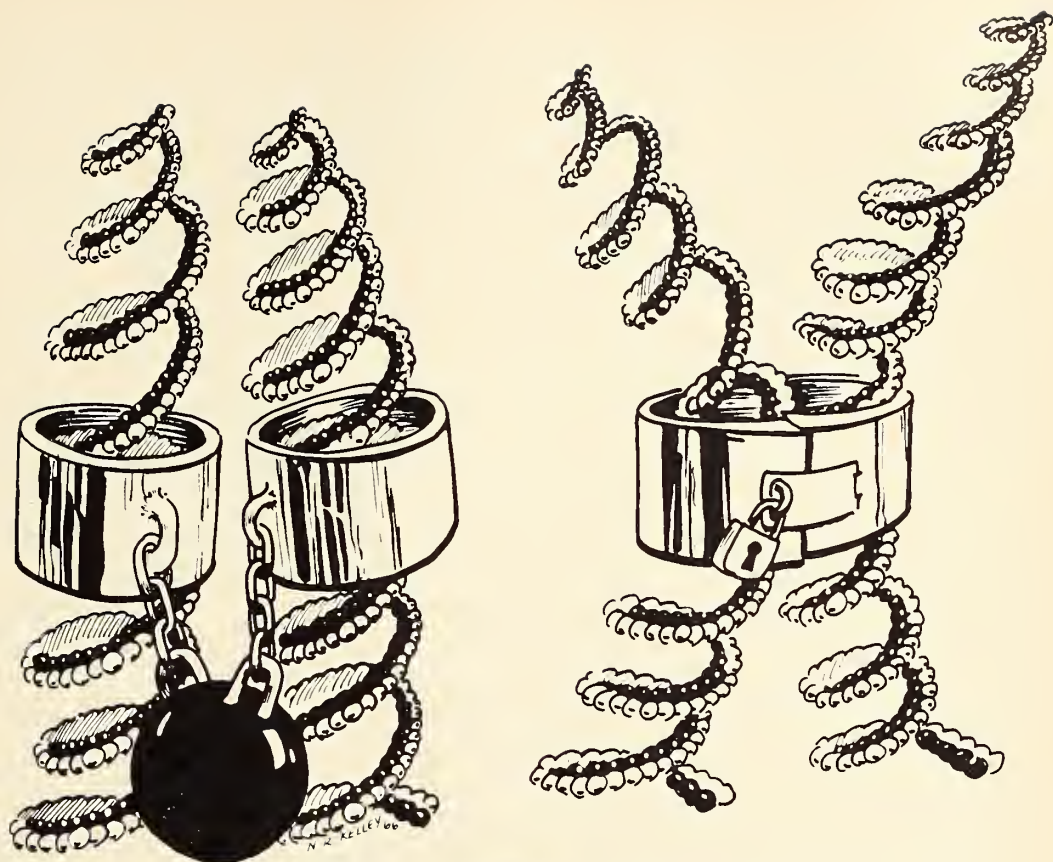


FIGURE 2. Cross-Linkage—Two DNA strands become irreversible joined together, linked either directly or by a small molecule.

might account for Von Hahn's observations. Unfortunately, his data showed only an insignificant difference (in the wrong direction) between arginine content of the histones of young and old cows, and he did not suggest this as a possibility.²⁵

Consideration of the consequences of his observations leads to several conclusions. First of all, the mechanism "would be effective only in absence of DNA turnover."²⁷ This correlates well with the observations in part II concerning the marked alterations with age of post-mitotic cells as compared to actively dividing cells. In addition, Tonna has observed that aged and metabolically devitalized osteocytes produce daughter cells of high metabolic activity when stimulated to divide;²⁸ suggesting that if the DNA strand can be induced to separate, as it would need to do

in mitosis, the enhanced binding of the histones is removed. Finally, the firmer binding would result only in reduced DNA function. RNA and protein synthesis should be quantitatively reduced but otherwise normal (Fig. 1).²⁷ A reduction in protein synthesis has indeed been observed.^{25, 27, 29} As mentioned before, however, faulty proteins and increased and faulty RNA have also been observed.^{15, 19, 20} Therefore, if an increased binding strength between histones and DNA does occur and if it is important in the aging process, it is not the only mechanism involved.

This process is intrinsic and progressive. If it occurs in tissues other than the thymus of cows it is very likely that it is also deleterious. What definitely has not been shown is that histone binding is a general phenomenon. The bovine thymus may be

a very unique organ, and similar studies are needed on other tissues.

Cross-Linkage

Cross-linkage "is a chemical bond joining together two or more macromolecules."³⁰ The linkage is generally considered to be a covalent bond. More often than not it is suggested that the link between the macromolecules is a bridge formed by a small molecule with two reactive sites, although a direct covalent bond between two macromolecules is also a possibility (Fig. 2).^{30, 32}

The idea that cross-linkage is important in cellular aging comes primarily from the well-established finding that collagen strands become cross-linked with age.^{30, 33} Since collagen and DNA are morphologically similar—unbranched, coiled strands—it is postulated that cross-linkage also occurs between DNA strands connected by covalent bonds could no longer separate for mitosis and might also cause RNA transcription errors.^{30, 31, 32, 34} As with the histone theory, this would account for the morphological changes of post-mitotic and actively mitotic cells since it would kill a cell that must divide and would cause more subtle changes in a post-mitotic cell. It does not, however, correlate with the observation that aged cells can be induced to mitose.

Other suggestive evidence for the occurrence of cross-linkage is the normal presence in mammalian tissues of known cross-linking agents such as quinones, dibasic acids of the Krebs cycle, and aldehydes.^{31, 32}

Direct evidence that DNA strands can be joined by cross-linkages has been obtained. Alexander treated a solution of separated DNA and histone with alkylating agents and obtained upon centrifugation a gel of pure DNA. He interpreted "the production of gel-DNA as the joining together of different molecules via covalent chemical bonds."³⁴ DNA cross-linkages have also been produced by the action of electrons.³²

Positive evidence for the formation of DNA cross-linkages in living tissues, how-

ever, has not been shown. Sinex remarks that "we know of no direct chemical evidence that DNA . . . (has) been altered by cross-linkage of the type we have been discussing in senescence."³⁰ Thus, at present, the involvement of cross-linkage in cellular aging is purely speculative.

Active Aging

One of the most intriguing suggestions regarding the process of aging concerns the active or passive role of the genetic system. Active aging is the process whereby the alterations making the organism more susceptible to its environment are initiated by the genetic system itself. Passive aging means that the genetic mechanism determines the susceptibility of the cell to the process but does not actually cause it. Interest in the active theory of aging has been growing since Jacob and Monad proposed the regulator-operator-structural gene hypothesis concerning the process of development.³⁵ If development and aging are part of the same process, then aging is controlled by the same deterministic mechanism.^{2, 15} A simple mechanism for active aging might be a moving zone of m-RNA synthesis which progresses from one end of a DNA strand to the other. This would account for both developmental and aging alterations.²⁰ By means of autoradiographic studies, Gall and Callan "demonstrated the existence of a specific sequential labeling of the giant chromosome loop (of *Tristatus cristatus cristatus*) by H³-uridine."^{15, 36} Our interpretation of the effects on the crested newt of sequential DNA function is given in Figure 3. Melting-point studies show that T2 phages produce one type of m-RNA early in development and another type later, both of which complex simultaneously with T2 phage DNA presumably at different spots. Both of these studies imply that the segment of the structural DNA molecule that is available for replication changes with time and is therefore correlated with aging. As pointed out above, the available portions of the structural DNA are determined by the histones, which are in turn determined by the regulator genes. Therefore, the



FIGURE 3. Active Aging—The sequential labeling of the DNA of *Tristatus cristatus*, the crested newt, suggests that aging is genetically controlled. The DNA strand itself determines when the newt has reached the end.

regulator gene could actively initiate any changes which occur with age and in so doing, might cause aging. The two experiments above show actively controlled intrinsic and progressive changes. The further suggestion that this results in detrimental aging effects is appealing, but is still highly presumptive.

Free Radical Theory

In the preceding discussion, we have dealt with theories suggesting that the source of cellular aging is the nucleus. There is one theory, however, which deserves to be mentioned in which the primary fault arises in the cytoplasm. The free radical theory as stated by Harman suggests that free radicals such as $\cdot\text{OH}$ and $\cdot\text{OOH}$ arise from the reduction of O_2 to H_2O in the mitochondria.³⁷⁻³⁹ The indiscriminate free radical chain reactions thereby initiated would result in lipid autoxidation at the mitochondrial level (possibly a source of lipofuscin) and protein coagulation in the cytoplasm. It is even possible that an occasional free radical might make its way

to the nucleus to interfere with the delicate genetic material (Fig. 4).^{38, 39}

Although the last step in this theory has no documentation, direct evidence for the presence of free radicals in cells has been obtained through electron spin resonance studies. That the mitochondria are the source of these free radicals is suggested by the relation of iron salts to free radical reactions, studies of the chemical energy production in plants, and lipid peroxidation products in Vitamin E-deficient mitochondria.³⁷⁻³⁹ In addition, Harman has fed cysteine and other compounds known to combine readily with free radicals to several strains of mice and observed an increased life span in some, but not all, strains.³⁸ The mice studied, however, normally died at a young age of leukemia or mammary carcinoma; so it is unclear whether Harman's experiments affect the cancer, the aging process, or both (if they are different). In addition to his diet experiments, he reports decreased human serum mercaptan levels and increased human serum copper levels with age. These two observations suggest an environment which is increasingly suitable for free radical reactions.^{38, 40} In the same vein, if it could be conclusively shown that lipofuscin arises from the mitochondria, it would be further evidence that free radicals are involved with aging since the variety of chemical characteristics of lipofuscin is consistent with what one would expect of a free radical chain reaction. As pointed out above, however, the source of lipofuscin production is still very much in doubt.

The free radical theory, if more firmly established by experiment, would satisfy Strehler's criteria. It would be as universal and intrinsic as oxidation reactions, it would progress as long as oxidation takes place, and the randomness of the free radical reaction could not help but be deleterious to the delicately controlled cellular milieu, probably by the production of high molecular weight, non-functional, non-diffusable, non-digestible polymers. First, however, it must be shown that uncontrolled free radical reactions actually



FIGURE 4. Free Radical Theory—A free radical originating in the mitochondria reacts indiscriminately with cellular molecules and may even attack the delicate nuclear material. The aftereffects of the free radical

are often more apparent than the free radical itself. In fact, to our knowledge, this is the only existing picture of a cellular free radical in action.

occur, and then that they occur often enough to be significant.

Summary and Conclusions

Four theories attempting to account for the cellular alterations coincident with aging, and evidence that the nucleus is the initial site of the aging changes have been presented. The degree to which each of the four theories satisfies Strehler's criteria for aging varies. All of them are intrinsic and progressive. All are presumably deleterious, but the degree to which they are harmful in any given system has not been

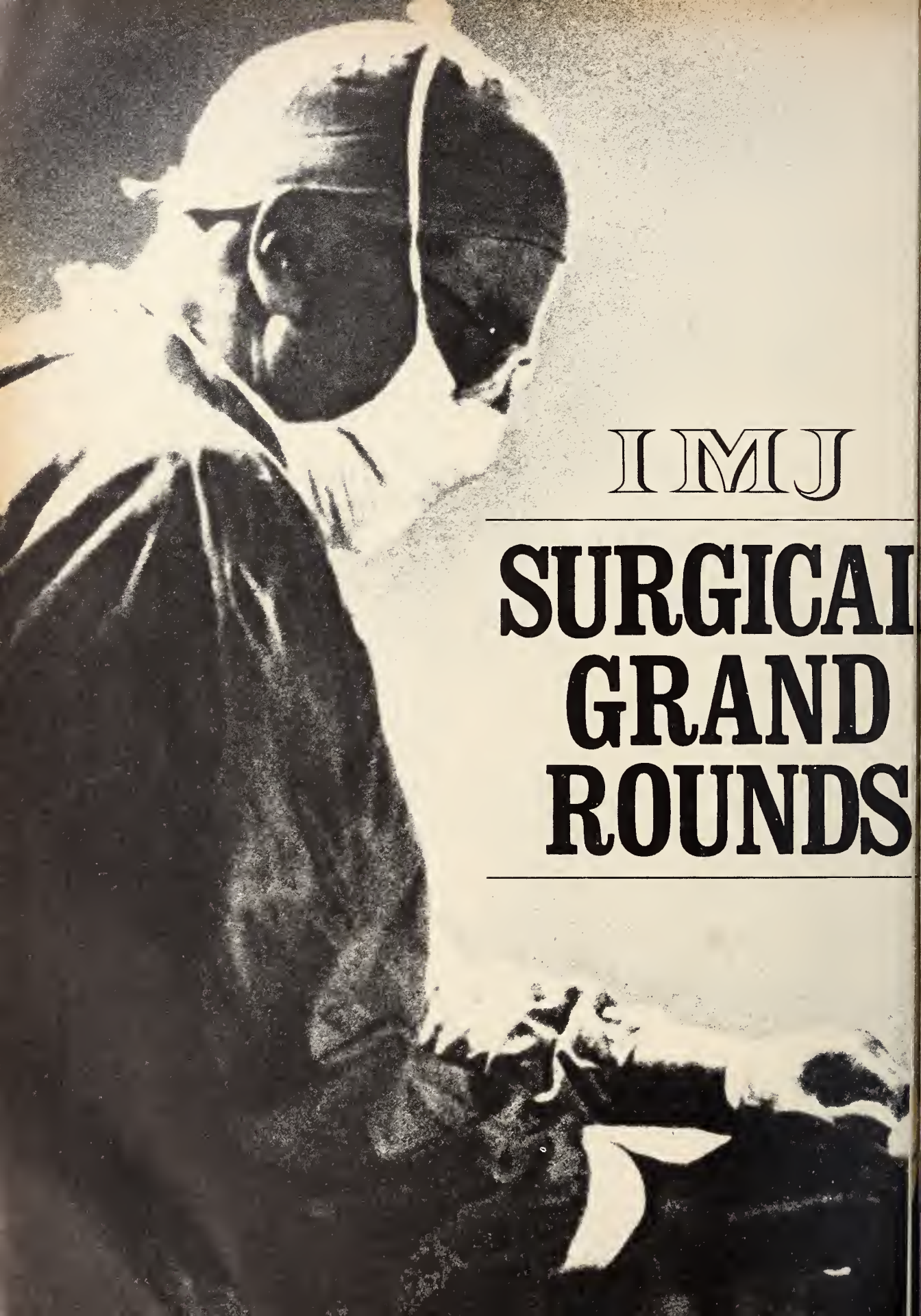
established for any of the four. All are primarily deficient in meeting the criterion of universality. Two have not been shown to occur in living cells and two have been demonstrated only in very specialized tissues.

The most obvious conclusion is that no complete explanation for the cause of and observations associated with cellular aging has yet been presented. It is very likely that no one mechanism is entirely responsible, but that many are involved to a greater or lesser degree in cells of differing organisms and tissues.

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IIMJ

SURGICAL GRAND ROUNDS

Professor and Chairman, Department of Surgery,
Northwestern University Medical School

This case was part of Surgical Grand Rounds held at Chicago Wesley Memorial Hospital on March 26, 1966.

CASE PRESENTATION

Retroperitoneal Fibrosis

Dr. George Gruner: The patient is a 48 year old white man, a judge, who was admitted to Chicago Wesley Memorial Hospital on January 13, 1966 with complaints of back pain since July 1965, constipation since August 1965, and coldness of his feet since July 1965. The patient was first hospitalized elsewhere in December 1965 when back pain was his main complaint. He had a previous episode of back pain 10 years ago and a diagnosis of degenerative arthritis of the lumbo-sacral spine was made. He was given a left heel lift which gave relief. The back pain which developed in July 1965 was not relieved by his heel lift.

An intravenous pyelogram was performed and suggested some displacement of the left ureter; however, cystoscopy and retrograde pyelography did not show obstruction or ureteral deviation. X-rays of the gallbladder and gastrointestinal tract were normal; however, there was a suggestion of an abdominal aneurysm. Physical examination revealed a blood pressure of 150/90. A palpable pulsatile mass was felt approximately 8 cm. to the left of the midline and this projected slightly on the right also. Pulses were equal bilaterally; however, there was a suggestion of a left popliteal aneurysm.

Dr. Abram Cannon: The lateral plain film of the abdomen was light but a rim of calcium was visible although on the anterior projection calcification could not be seen. This strongly suggested an aneurysm of the aorta. There were degenerative changes in the lumbar spine which were rather marked for an individual of this

age. The aortogram demonstrated the aneurysm. The renal vessels and right kidney appeared to be normal. A subsequent abdomen film showed the right calyceal system, pelvis and ureter to be normal. On the left side there was considerable dilatation of the calyceal system, pelvis, and upper third of the ureter (Fig. 1). It is unusual to see an obstruction of the ureter with an aortic aneurysm. For some reason or other aneurysms usually do not involve the ureter.

Dr. Gruner: The patient was operated upon January 31, 1966. In addition to the abdominal aneurysm which was moderate in size there was a dense plaque of retroperitoneal fibrosis which involved the left ureter. The ureter was dissected free from the plaque, and the aneurysm was resected along with a portion of the plaque. Teflon graft was used to replace the aorta. The iliac vessels appeared normal. The patient recovered well following surgery. The renogram on the 9th of February 1966 showed a residual obstructive pattern on the left side. The patient was discharged on February 12, 1966.

Dr. John Beal: An aortogram is not usually performed when an aneurysm is detected on a plain film of the abdomen. Would you comment upon the reason for the angiographic study in this patient?

Dr. John Bergan: I do not believe that angiography is needed routinely to demonstrate aneurysms. In this instance the demonstration of the renal vessels was helpful and later a pyelogram was obtained. (Patient presented) Pain is frequently associated with retroperitoneal fibrosis. How is your back pain now?

Patient: I have not had any pain since leaving the hospital.

Dr. Beal: Did any of the medication you received relieve the pain before the operation?



FIGURE 1. The urogram following aortography shows a normal right renal collecting system and ureter. The left kidney is hydronephrotic but the lower left ureter is seen to be normal and the Psoas shadows are well outlined.

Patient: The medications I took before had virtually no effect and the pain was constant. The pain would diminish or become greater in intensity but I was never really free of it until after the operation. (Patient leaves)

Dr. Bergan: This patient has been presented for two reasons. One is the opportunity to discuss retroperitoneal fibrosis, an interesting disease of unproven etiology; and second we have noted its association with abdominal aortic aneurysms. This relationship was mentioned previously in 1961 in the *Journal of Urology* in a discussion of urologic lesions brought on by aortic abnormalities (1). This association is not well known by vascular surgeons.

This patient is one of the two we have seen at Wesley. Both were male, in their forties and looked somewhat older than their given age. One had primarily intestinal complaints and the other had low back pain. Both had moderately small aneurysms, localized to the aorta, not involving the

renal arteries or the iliac arteries. In both instances resection of an area, not the whole retroperitoneal fibrosis, was followed by relief of symptoms, and in both the aortic aneurysm was removed. This condition has a very distinctive appearance at surgery. There is white plaque (Fig. 2) in the retroperitoneal area which is characteristic. The duodenum in this patient as well as in the other case was densely adherent in this area and had to be dissected free. When mobilization of the duodenum had been achieved the aorta was cross clamped and opened longitudinally after the iliac arteries were also occluded (Fig 3). Incision into the aorta demonstrated the retroperitoneal fibrosis and clot within the aneurysm. This clot is of course why one does not do a routine angiography in aneurysms; the lumen can appear to be of normal size. When removed, the specimen grossly appeared to consist of three layers; the peritoneum, the fibrous plaque and the

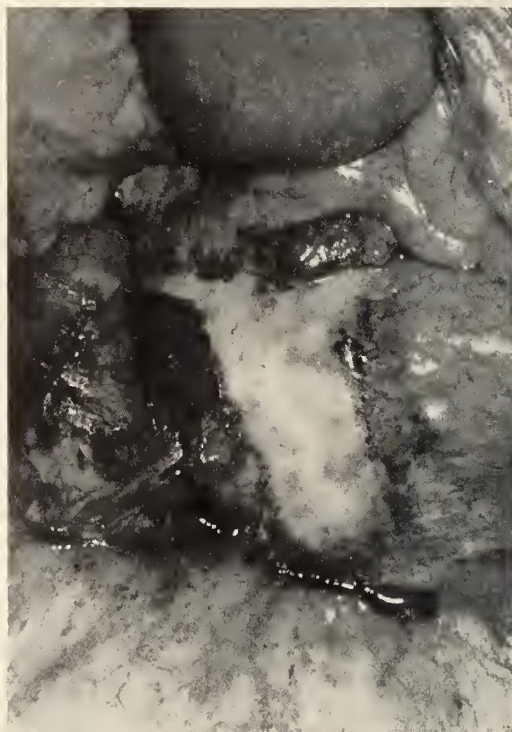


FIGURE 2. Upon exposure of the posterior parietes by reflection of bowel superiorly, the dense white plaque of retroperitoneal fibrosis is immediately identifiable.

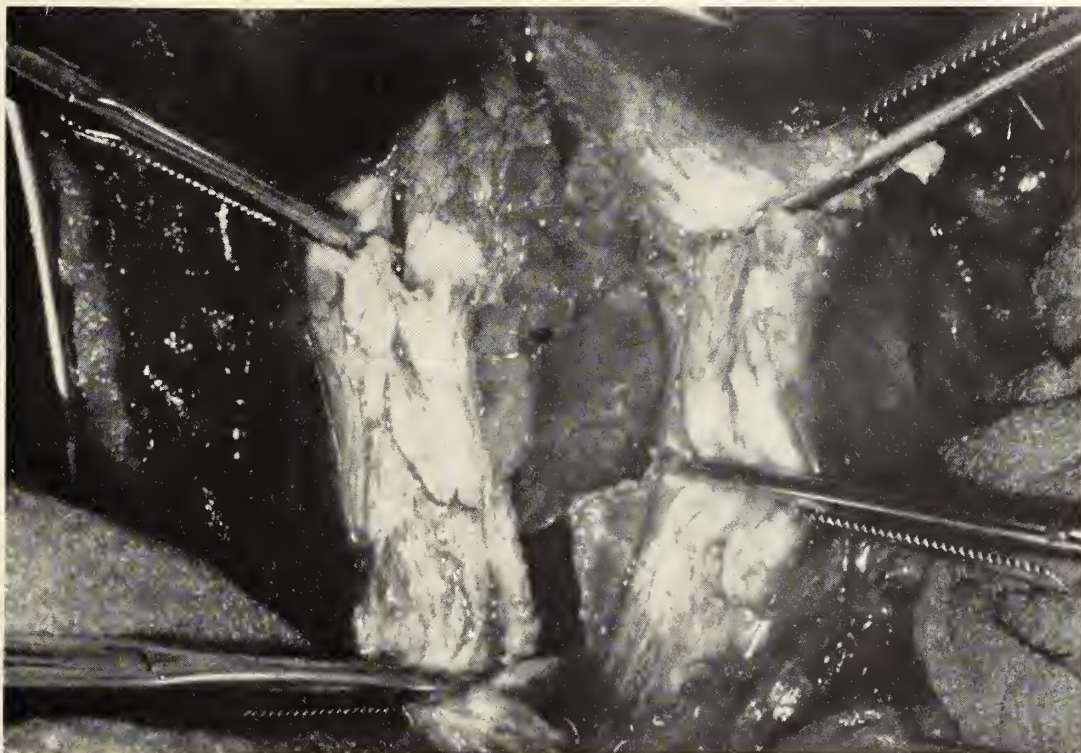


FIGURE 3. With the aorta occluded superiorly and the iliac arteries clamped inferiorly, the area of fibrosis and aorta have been incised longitudinally.

As the divided plaque is retracted laterally by clamps, the laminated endaneurysmal thrombus is seen.

aortic wall and organized clot within (Fig. 4).

This patient is rather typical of patients with retroperitoneal fibrosis. Most are middle-aged males, pain is prominent in the early and acute stages. Pain usually originates in the flank and extends to the lumbosacral region, as it did in this instance. Usually it has an insidious onset, is dull but occasionally severe. Some patients have general malaise and low grade fever with an elevated sedimentation rate. In later stages the identification may be incidental to an abdominal operation. For example, this week we had a patient with an abdominal aneurysm and the residuals of retroperitoneal fibrosis without symptoms. This was then a third patient with an aortic aneurysm and retroperitoneal fibrosis.

Prominent urologic manifestations such as unilateral or bilateral hydronephrosis, dysuria, frequency, chills or sudden anuria

usually lead to the proper diagnosis. It is typical as in this instance, that ureteral catheters can be passed easily from below and usually produce a great deal of urine. Occasionally, and this has been seen by Dr. Otto Trippel of our staff, vena caval obstruction can occur and result in the appearance of massive edema of both lower extremities or iliac vein occlusion can produce edema of one extremity or edema of the scrotum. Dr. Trippel has encountered aortic occlusion due to this process which has been reported in the literature.

The etiology is unknown. One theory proposes that the fibrosis is caused by a smoldering chronic infectious process in the retroperitoneal area difficult to detect because of the relative inaccessibility of the retroperitoneum. The association with ulcerative colitis, regional enteritis or appendicitis has been considered to support this theory. On occasion it has been thought to be due to bleeding in the retroperito-

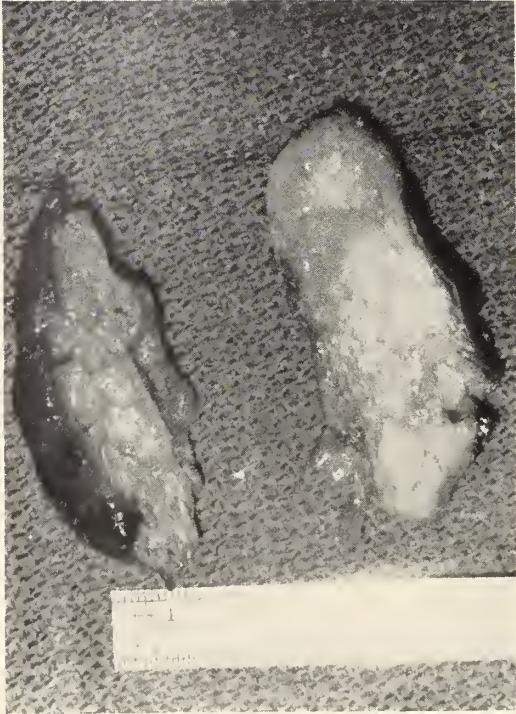


FIGURE 4. After excision, the thickness of the plaque of retroperitoneal fibrosis can be best appreciated.

neum, such as leaking from an aortic aneurysm. It has been reported with Henoch-Schoenlein Purpura as well. Tripel and Hoffman (2) have suggested that this may be part of an acute hypersensitivity reaction, a concept which has been widely quoted by Dr. Ormand, who is credited with the description of the syndrome in 1948. Another possible cause has

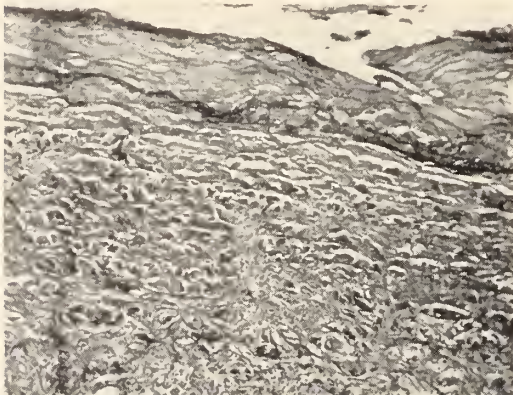


FIGURE 5. Wall of aortic aneurysm showing calcific arteriosclerosis (above) and dense fibrous tissue infiltrated with chronic inflammatory cells.

been recently noted. This is the occurrence of retroperitoneal fibrosis in patients receiving methysergide maleate (Sansert®). About one percent of patients who receive this therapy have developed retroperitoneal fibrosis. Regardless, of other treatment, the fibrosis will continue until the medication is stopped. When the methysergide is discontinued, the fibrosis regresses.

In summary, this represents a case of retroperitoneal fibrosis, an interesting condition of unknown etiology, occurring in a patient who had rather typical manifestations and also had an aortic aneurysm.

Dr. Frank Carone: Microscopic sections of the aortic aneurysm revealed marked calcific arteriosclerosis of the intima with extensive ulceration and thrombosis. The thrombus forms a thick layer and varies in age since it demonstrates different stages of degeneration and hyalinization. The arteriosclerotic process is so extensive that it has impinged upon and largely replaced the media (Fig. 5). This is best seen with elastic tissue stains which show that the media is almost entirely absent since only occasional foci of fragmented elastic fibers remain. The outer layers of the aneurysm are made up of extremely dense fibrous tissue containing many foci of chronic inflammatory cells and occasional microabscesses (Fig. 6). The latter process extends in an irregular fashion into the fibroadipose tissue around the aorta. These tissues are free of hemorrhage or old blood

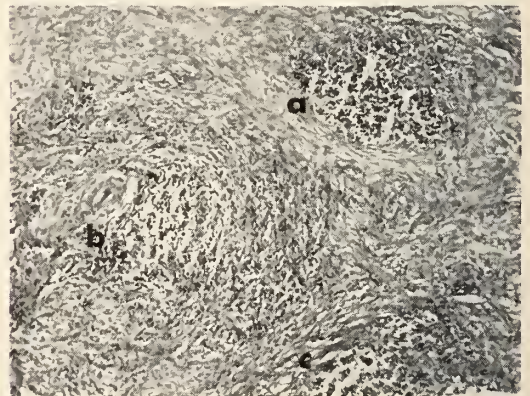


FIGURE 6. Retroperitoneal fibrosis showing a microabscess (a) and collections of chronic inflammatory cells (b and c).

pigment—evidence against prior rupture or leakage of the aneurysm. The pathology can be summarized in the diagnoses of arteriosclerotic aneurysm of the abdominal aorta and retroperitoneal fibrosis. The unusual morphological features of this case involve the outer wall of the aneurysm and the adjacent tissues which show an extensive active chronic organizing inflammatory process with prominent scar formation. These changes could be due to a chronic smoldering infectious process. Although Gram and Acid-Fast stains were negative for bacteria, an infectious agent cannot be ruled out. The finding in this case suggests that bacteriological studies may uncover an etiologic agent in some patients with retroperitoneal fibrosis.

Dr. John Grayhack: The primary clinical manifestation of this disease is urologic. It is a cause of renal failure which is reversible, either by bypassing the lesion or by dissecting the ureter from this fibrotic mass and placing it intra-peritoneally. Ap-

parently some of these subside spontaneously. Dr. Kropp had one that did regress after resection of an aortic aneurysm. The absence of an intrinsic ureteral lesion such as a non-opaque calculus or neoplasm should always be established. You must see the whole ureter before being certain that there is not an intrinsic lesion. The typical X-ray appearance associated with retroperitoneal fibrosis is medial displacement and obstruction of the mid-ureter. Characteristically a ureteral catheter can be passed beyond the point of obstruction.

Dr. Bergan: Cortisone has been recommended in the past. In our first case we gave prednisone post-operatively with regression of the process. It has also been found that antibiotics can be used with regression or there is regression with no particular treatment.

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CHOLERA VACCINATION

Because of the possibility of the spread of cholera westward from Asia and the Middle East to countries in Eastern Europe, all travelers to these areas are advised to be vaccinated against cholera and have in their possession a valid international certificate of vaccination or revaccination against cholera.

The standard primary course of cholera vaccine recommended is two injections given at least seven days apart. For persons previously vaccinated one booster dose of vaccine is recommended for revaccination.

The cholera vaccination certificate is valid for six months, beginning six days after the first injection in the primary series. If revaccination is within the six-month period, the certificate then issued is valid immediately. If the revaccination is done after the six-month period of the previous certificate has expired, the subsequent certificate does not become valid until six days after revaccination.

Cholera vaccinations may be carried out by private physicians who can issue certificates on the international form. These certificates are not valid, however, until they bear the approved stamp of the local County or State Health Authority. Failure to observe this requirement will cause the traveler inconvenience.

The USSR requires valid cholera vaccination certificates from all arrivals from Turkey. Lebanon requires all travelers from Asia to be in possession of valid cholera vaccination certificates. *U. S. Department of Health, Education, and Welfare Morbidity and Mortality, Week Ending May 14, 1966.*

Functional Hearing Loss in Children

by Earl W. Stark, Ph.D.
champaign

A FUNCTIONAL (NON-ORGANIC) hearing loss is usually defined as an auditory disturbance in the absence of an apparent organic condition which might account for the disturbance. This definition implies that the problem has received thorough audiological and medical investigation but no organic condition was found to account for the symptoms. Chaiklin and Ventry¹ have suggested that functional hearing loss may be operationally defined as intra- or inter-test audiometric discrepancies that cannot be explained by any of the medical conditions known to cause audiometric discrepancies.

Functional hearing loss has received greatest attention since World War II and is presently recognized as a problem of major importance in the fields of audiology and otology. One can well appreciate the problem by considering that the incidence of functional hearing loss in the Veterans Administration population has been estimated as ranging from 11 to 45 percent.² Unfortunately, functional hearing loss is not restricted to the VA population. Industry well recognizes the effects of noise upon hearing and is also interested in the problems of functional hearing loss. Many states have recently noted a marked increase in compensation claims for hearing loss sustained in the course of employment.

There is little doubt but what this increase will be followed by an increase in the incidence of functional hearing loss, since the incidence appears to be highest among persons who stand to receive compensation for hearing losses.

"Functional hearing loss" is most often used as the generic term to describe both malingering and so-called psychogenic impairment. The former implies the conscious and deliberate adoption or fabrication of hearing impairment for personal gain, e.g., financial reimbursement, relief from a distasteful responsibility. Psychogenic hearing loss implies that the cause of the auditory disturbance is psychological (literally, originating in the mind). The terms hysterical deafness, conversion deafness, and depression deafness are also frequently used to describe this condition. The individual with a psychogenic hearing loss has subconsciously adopted an illness. He is not trying to "fool" anyone and does not know that his hearing is normal or at least better than what his behavior indicates.

Most frequently, functional hearing loss appears as an overlay to an actual organic impairment. That is, the individual with a "functional overlay" is consciously or subconsciously exaggerating his loss beyond that which can be accounted for by organic conditions.

An important feature of functional hearing loss is knowing when to suspect it. It has already been indicated that the incidence is usually quite high in those situations involving the possibility of financial gain. The physician and the audiologist should be particularly alert at these times. Hearing complaints arising from vague origin or that are of sudden onset without obvious etiology should receive the benefit of very careful scrutiny. The audiological signs which suggest the possibility of functional hearing loss are many. One of the easiest for the audiologist to detect and usually one of the first is a discrepancy between pure-tone audiometric findings and the ability of the patient to hear and understand conversational voice. He may, for example, volunteer pure-tone thresholds of 50-60 dB in each ear and yet show no difficulty hearing conversational speech. Intra-test inconsistencies may be observed, although many individuals with functional hearing loss are quite apt at repeating consistent pure-tone thresholds. A difference of 10 dB or more between test-retest thresholds should alert the audiologist and otologist of possible functional loss.

The examiner should also be on the alert for intertest inconsistencies. The most obvious is the relationship of the pure-tone thresholds (particularly the average of thresholds at 500, 1000, and 2000 cps) and the speech reception threshold. Generally, one can expect the SRT to be within plus-minus 6 dB of the pure-tone average. In cases of sharply falling audiograms and of extremely poor speech-sound discrimination ability, the relationship may exceed the above value.

Certain indices of Bekesy audiometry have recently been utilized as an indication of possible functional hearing loss, e.g., the relationship of thresholds obtained by continuous-tones with those obtained by interrupted-tones. Many individuals exhibiting functional losses trace sweep-frequency Bekesy audiograms which show better hearing by the continuous-tone tracings than is revealed by the interrupted-tone tracings, a pattern not frequently observed in cases

of normal hearing and in those with actual organic pathology. This particular Bekesy pattern has been called the Jerger Type V.

Functional hearing loss is not found only in the adult population. Recently, clinicians have observed this phenomenon in children also. Although valid estimates of incidence have not yet been determined, the literature suggests that it occurs all too frequently in this population. Present estimates range from 1% to 12% depending upon the investigation cited.³ Valid estimates are hampered by such factors as lack of agreement of the definition of functional hearing loss and, most important, the skill of the audiologist or otologist in detecting the problem. Unfortunately, not all examiners are equally endowed with the skill necessary to detect functional hearing loss in children. The various incidence figures do suggest that functional hearing loss in children occurs almost three times as often in females than males and seems to involve the pre-teen and early teen period more than any other age period.

Most clinicians view functional hearing loss in children as psychogenic in origin rather than malingering. The reasons for the existence of this problem in children need further investigation. It is known, however, that emotional disturbances can restrict the normal reception and use of sound. That is, sounds which are threatening or which produce considerable anxiety may cause the individual to suspend the normal use of hearing. A child uses his hearing to develop feelings or impressions of love, well-being, hate, rejection, punishment, fear, hostility, etc. If his auditory experiences create an imbalance with his environment, he may behave as though he has little or no hearing.

The following three cases serve to illustrate the difficulty and importance of detecting functional hearing loss in children.

Report of Cases

Case 1.—A 16 year old female referred to the University of Illinois Hearing Clinic for a hearing aid evaluation. A loss of hearing was first suspected in 1963 when she failed a pure-tone screening test. Sub-

sequent threshold audiometry revealed a bilateral hearing impairment of moderate degree. Otological examination showed negative ear, nose and throat findings with the exception of a flat loss of hearing in each ear averaging 40-45 decibels. Etiology was undertermined. The patient was referred to a university hearing clinic for audiological and hearing aid evaluations. The former showed a bilateral loss of hearing similar to that noted by the otologist-speech and pure-tone audiometry were in good agreement. The hearing aid evaluation suggested that this individual was a good candidate for amplification. Because of a strong negative attitude towards a hearing aid, however, amplification was not recommended. In 1964 this young lady was seen by another university hearing clinic for a repeat audiological evaluation. In general, the findings were in excellent agreement with those found previously. At the time of her referral to the University of Illinois Hearing Clinic, she had received two years of aural rehabilitation and speech therapy in the public schools. Suspicion of functional hearing loss was first aroused when the examiner noted a discrepancy between the previous test data and her ability to hear conversational voice. She had no difficulty hearing or understanding normal conversation with a 45-50 dB hearing loss. Initial pure-tone audiometry showed a loss of hearing in both the left and right ears of 50-60 dB. Speech audiometry, however, revealed normal threshold hearing for speech bilaterally. Subsequent pure-tone testing also yielded normal hearing.

Case 2.—An 8 year old female referred to the University Hearing Clinic for hearing aid evaluation. Loss of hearing was noted by a school nurse about 14 months prior to the appointment. Parents were aware of no hearing difficulty. Otological evaluation revealed negative ear, nose and throat findings with the exception of a bilateral loss of hearing of 15-30 decibels. Diagnosis was "familial progressive sensorineural hearing loss bilateral." Initial pure-tone audiometry suggested a mild loss of hearing (average of 25 dB) in each ear. The

examiner, however, felt that these findings were not consistent with the patient's ability to hear very soft speech. Speech audiometry revealed completely normal threshold hearing for speech bilaterally. Subsequent pure-tone testing also showed normal hearing. Full-range Bekesy audiometry supported these findings.

Case 3.—An 8 year old female referred for hearing aid evaluation and aural rehabilitation. Loss of hearing was suspected by the teacher and parents. Otological evaluation revealed normal ear, nose and throat findings with the exception of a bilateral loss of hearing. Diagnosis was "moderately severe perceptive hypacusis secondary to rubella infection of the first trimester of gestation." Initial pure-tone audiometry suggested a bilateral loss of hearing. Again, the clinician noted a discrepancy between these findings and the child's ability to hear conversational voice. Speech audiometry revealed normal threshold hearing for speech in both the left and right ears. Repeat pure-tone testing showed normal hearing throughout the entire frequency range and discrete-frequency Bekesy audiometry also showed normal hearing.

Comments

The above case reports are examples of the several cases of functional hearing loss recently observed in the child population evaluated at this Clinic. All have certain features in common: For example, all are females within the pre-teen or teen age period. Each had received otological and audiological evaluations and in each instance the findings of the former were negative with the exception of the hearing losses. In each case the audiological finding which led to the suspicion of functional hearing loss was a discrepancy between pure-tone thresholds and the ability of the child to hear conversational voice. Speech reception thresholds showed significantly better hearing than was indicated by the initial pure-tone thresholds. The final pure-tone, speech, and Bekesy audiometric data showed that all three children possessed normal hearing. This finding raises a very

interesting point. The opinion that functional hearing loss most often occurs as an "overlay" to an actual organic loss may need modification when considering a child population. To date, insufficient evidence is available to make any definite statements.

Another important observation is that all three of the children produced consistent pure-tone audiograms from one evaluation to another until a functional loss was suspected. In other words, not all children with functional hearing loss show obvious intra-test (in this case pure-tone) audiometric inconsistencies. This point is clearly emphasized by Case 1. This young lady had received a pure-tone evaluation from a speech therapist, an otologist, and three audiologists before certain discrepancies were observed which led to the eventual diagnosis of functional hearing loss. All three cases point-out the fact that pure-tone audiometry alone may not be sufficient to detect functional hearing losses. More advanced audiometry, especially speech audiometry, may be necessary before a functional loss can be detected and true organic hearing determined.

It has been the experience of this writer that the audiologist rather than the physician is most often the first to suspect a functional hearing loss. This may be because he spends more time with the child and has greater opportunity to observe test inconsistencies. Also, he usually administers a larger test battery and is able to compare test data in many ways.

These case reports clearly show that the physician and audiologist must cooperate with one another if a correct diagnosis is to be made. One can well imagine the effect that an incorrect diagnosis of hearing loss might have had upon the educational and social environments of these children, to say nothing about the emotional-psychological factors. This writer encourages all physicians to more frequently use the services offered by the audiologist in order that children suspected of having hearing losses may receive complete audiological evaluations in addition to complete medical examinations.

Summary

The phenomenon of functional (non-organic) hearing loss is briefly discussed, particularly its observance in children. Three case reports are presented which illustrate this disturbance in a child population. The difficulty and importance of detection are stressed. The physician is urged to utilize the services of a hearing clinic in order that children suspected of hearing losses may receive complete audiological evaluations so that correct diagnoses can be made.

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Gastrophotography

Olimpo Galindo, M.D., F.A.C.S./chicago

METHODS TO DIAGNOSE the pathologic conditions of the stomach are far from being completely satisfactory. The stomach is still a hidden organ defying, in many instances, all methods of investigation. Up to now, X-ray examination has been the most fruitful method of diagnosis, but even when complemented with gastric secretion studies and clinical, cytologic and gastroscopic examination, the diagnosis occasionally remains a mystery.

Color photography is a technique that greatly facilitates and supplements the study of the stomach, being at times the only source of a definite diagnosis.

Early attempts to photograph the mucosa of the stomach took place more than 68 years ago, when Lange and Maltzing¹ devised an intragastric camera containing lens, flashlamp and film capsule, very similar, in fact, to the modern gastrocamera. It was unfortunate that these attempts at black and white photography found little success due to the poor quality of the photographic emulsions. Many years later (1929) Porgcs, Heilpern and Back² developed the gastrophotor, a pinhole camera which took 8 to 16 pictures of the stomach simultaneously, in black and white, but the poor quality of the pictures obtained and the technical difficulties encountered as the gastric juice leaked into the camera, were

factors which dampened the original enthusiasm for this instrument.

Similarly devised intragastric cameras were developed in succeeding years, but it was only in 1949 when Ugi³ from Japan, working with the Olympus Optical Company of Tokyo, produced the first modern gastrocamera (GT-1) still using black and white film. After several modifications and simplifications a significant improvement took place when Imai introduced color in gastrophotography. Since 1953 Tasaka and his associates⁴ at Tokyo University Medical School have made intensive observations with the gastrocamera. The latest instrument, which we are using today, is the gastrocamera GT-5 (photo 1), introduced by Dr. Y. Hara into the United States at the end of 1962 at the University of Wisconsin Medical School, in Madison. Starting in 1963 Drs. J. F. Morrissey, Giuseppe Perna and Hara conducted the first clinical trial on the gastrocamera in the United States. At the end of 1965 the first training program was formally established at the University Hospitals in Madison, Wisconsin, under the directorship of Dr. Morrissey.

It is not our purpose to give a detailed description of the gastrocamera. Those interested may find this information in the original articles on the gastrocamera by Dr. Morrissey et al.⁵ and by Dr. G. Perna et al.⁶ But we would like to emphasize that this instrument is a very efficient and ingenious one, easy to handle from the outside through the control unit. The camera itself (photo 2) is at the tip of the flexible

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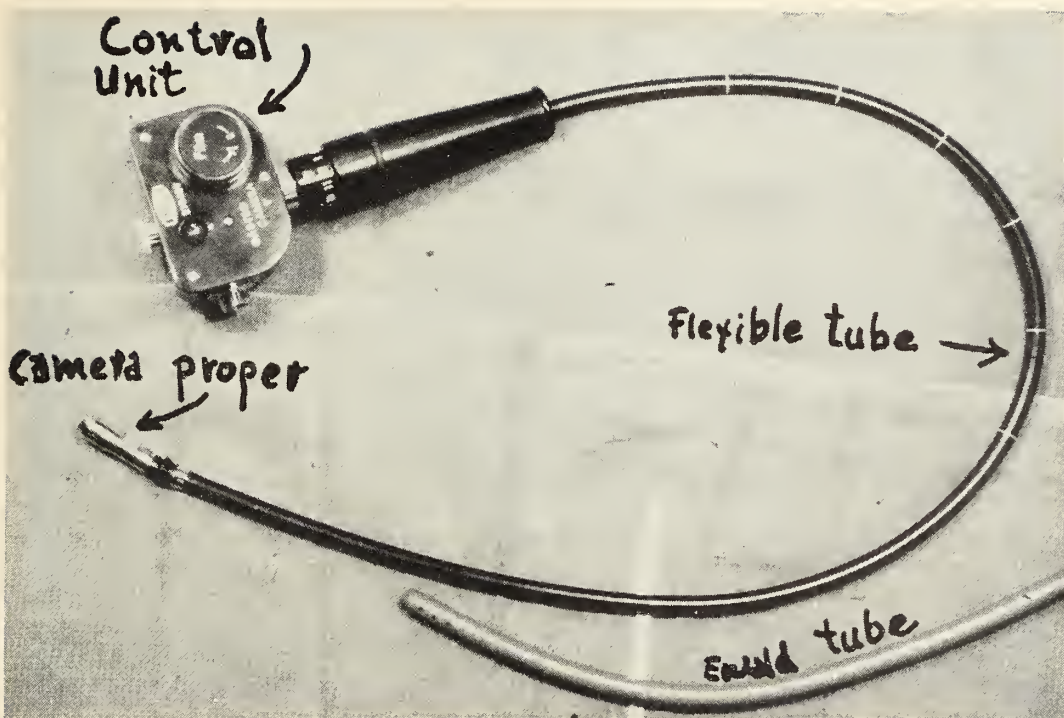


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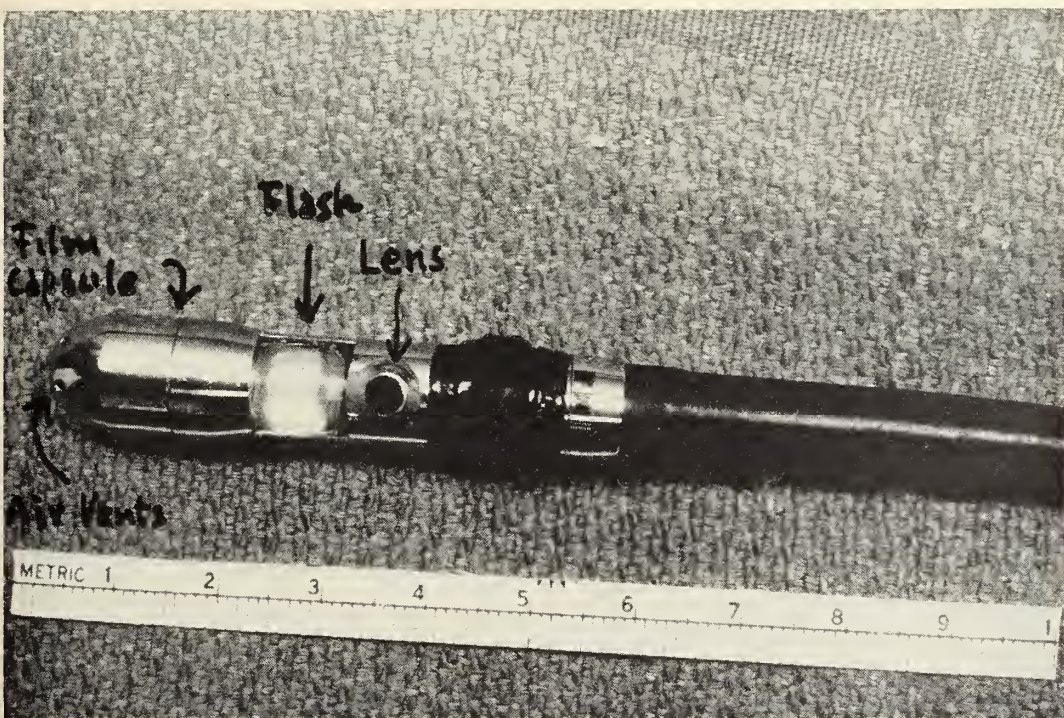


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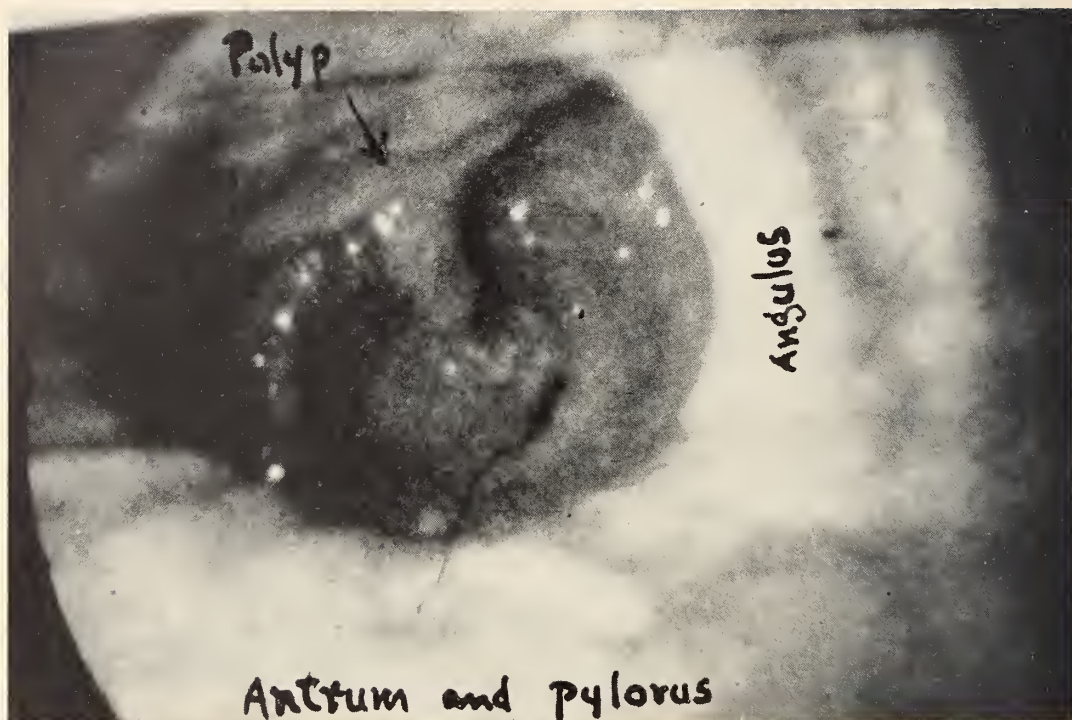


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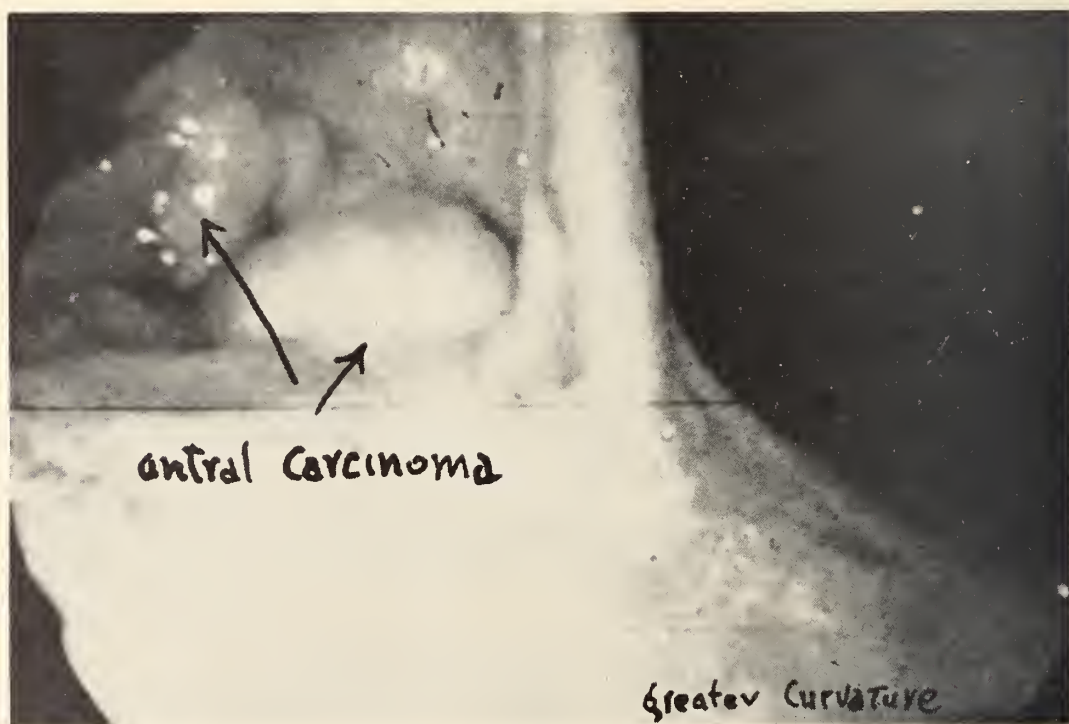


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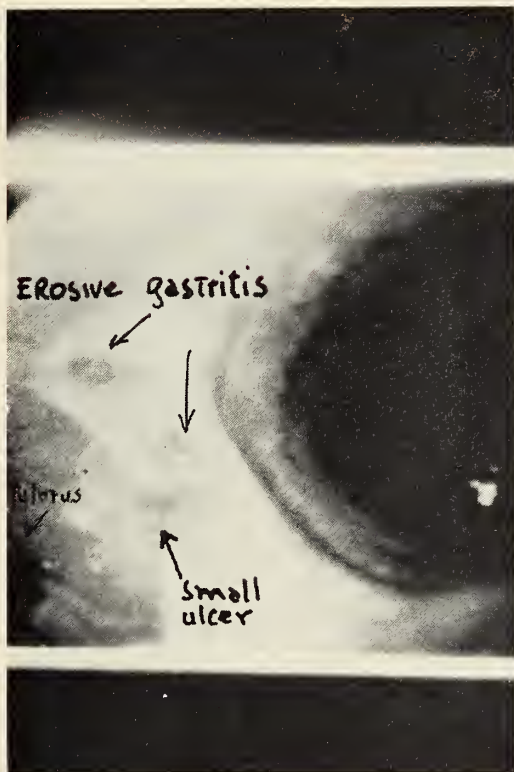


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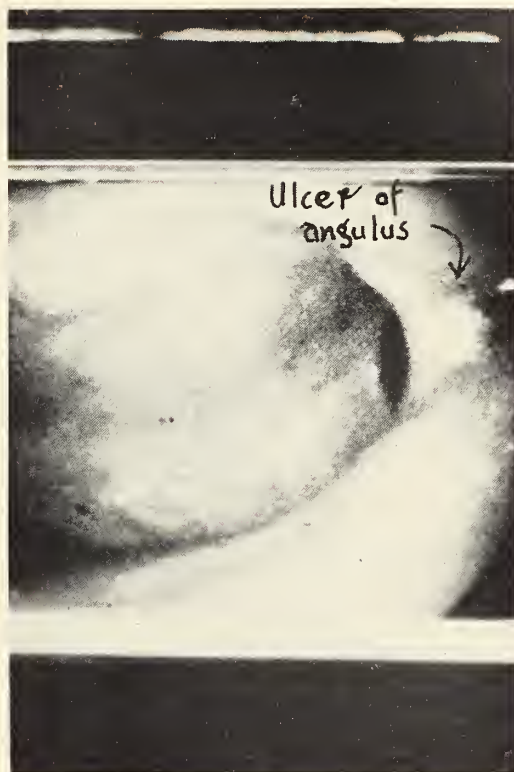


PHOTO 6.

connecting tube and contains a tungsten filament flash lamp, air valve to inflate the stomach and the film capsule, connected to a remote power supply and discharge condenser. The interesting part, however, is the 80° wide angle lens which allows the camera to photograph a rather large area of the stomach in each picture, increasing the chances of "capturing" even a very small lesion, which could escape detection when employing other means. Photography of wide areas is important as one or more landmarks appear in the field of view, a factor that aids in the accurate localization of the lesion, or, if subsequent pictures are taken, helps to determine its former site if the lesion has healed.

The diagram shows the comparative areas that can be photographed, from the same distance, by a) the Hirschowitz fiberscope, b) the conventional gastroscope, c) the Olympus fiberscope-camera (GT-F) and d) the gastrocamera (GT-5).

Interpretation. If the lesion is located at 1.5 cms. or more from the lens, it will be photographed in sharp focus. In general, the photographs obtained are amazingly clear, a factor which permits accurate interpretation and diagnosis. In each gastrocamera examination 32 successive exposures are taken in a preset pattern, striving to photograph the entire inside of the stomach. Lesions are shown from different angles, making it easy to study them at leisure. These photographs make a permanent record which can be observed and compared in subsequent examinations. Lesions are discovered which are too small or too shallow to be demonstrated by X-ray examination. The so-called "blind areas" of the stomach defy detection by gastroscopic methods, but can be beautifully visualized through gastrophotographs. Besides the common lesions as peptic ulcers, cancer and foreign bodies, atrophic and hypertrophic gastritis, alcoholic gastritis, erosive gastritis and bleed-

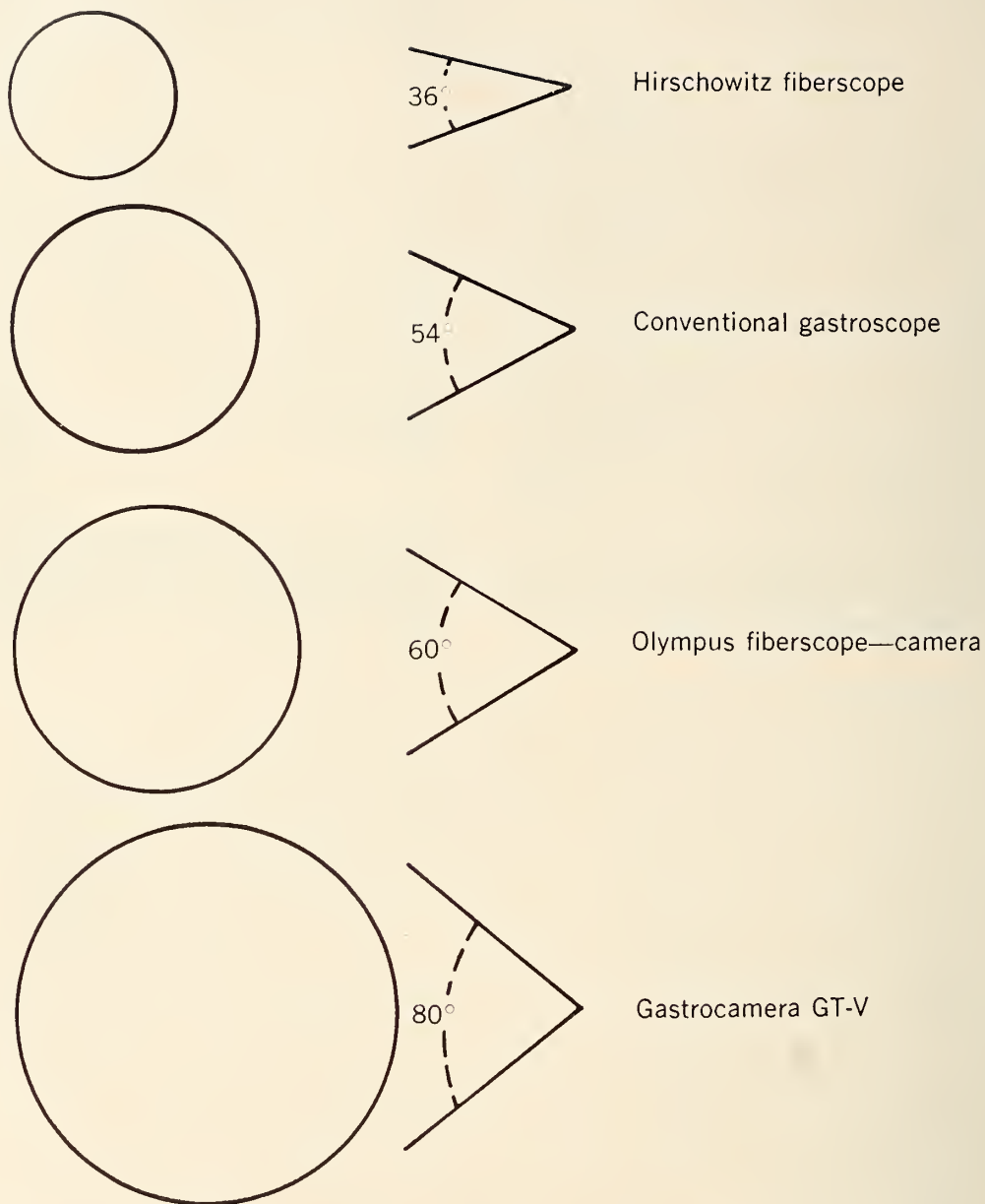


FIGURE 1. Comparison of the AREAS PHOTOGRAPHED, at the same distance from the lens, by the instruments named.

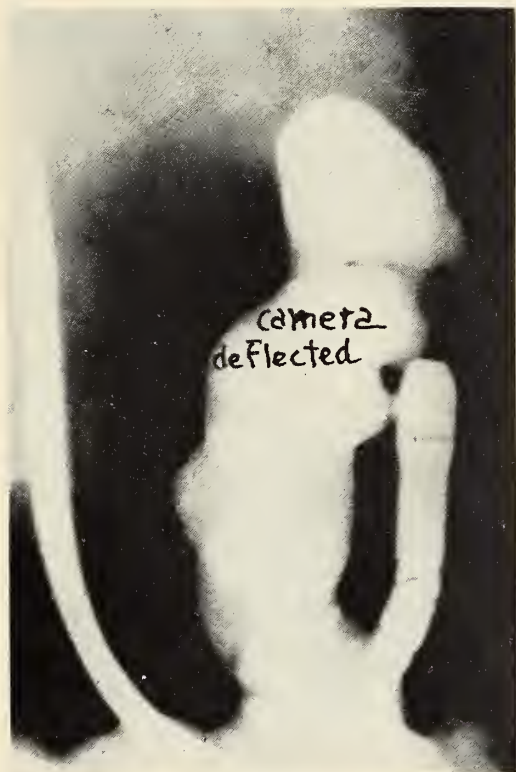


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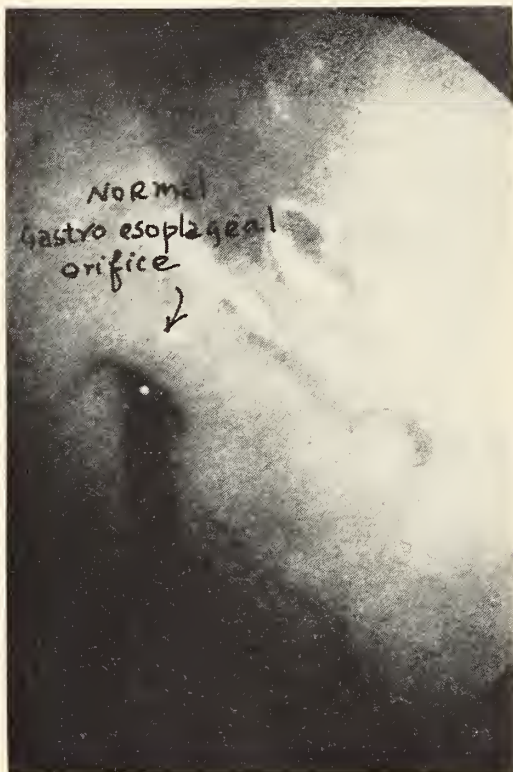


PHOTO 8.

ing superficial ulcers, are readily identified.

Technique of gastrophotography. The preparation of the patient is the same as that used for other endoscopic examinations. A liquid supper is ordered the night preceding the procedure with nothing by mouth after midnight. In hospitalized patients we give premedication (Meperidine 50 millgr., Vistaril 50 milligr. and Atropine Sulfate 0.6 milligr.) 45 minutes before the procedure. Premedication is omitted in all outpatients and they get along very well without it. The throat is always anesthetized with 0.5 to 1% Pontocaine hydrochloride and the stomach is washed with water containing an antifoaming agent (Silaine) by means of an Ewald tube.

The gastrocamera is passed down into the stomach with the patient in a sitting position. The stomach is inflated with air and the position of the camera determined by the light of the flash through the abdominal wall. Tolerance to this examination is sur-

prisingly good because of the flexibility of the tube. When necessary, patients are willing to repeat the procedure again and again.

Examination of the lower 2/3 of the stomach.

The lower 2/3 of the stomach can also be photographed, but in a more limited manner, with the gastroscopes. With the gastrocamera the "blind area" at the right of the angulus needs occasionally a re-take, but usually is seen with no difficulties, along with the pyloric "fleurette," the entire antrum and the walls of the stomach at this level (photos 3, 4 and 5). The camera is then withdrawn in successive steps, rotating and changing its angulation progressively until the midstomach, the lesser and greater curvatures are properly exposed (photo 6). By this time 15 to 18 photographs have been taken from these areas.

Examination of the upper 1/3 of the stomach.

It is in this region of the stomach where the gastrocamera shows its remarkable value. The esophageal orifice and the areas above and around it are impossible to photograph by any other means. The gastrosco-
 pist can not visualize well, much less photograph, lesions at this level, because the lens of the gastroscope is in direct contact, or below the lesion.^{7, 8} The radiologist encounters the costal margin as an obstacle for proper manipulation.

The gastrocamera is the ideal instrument to examine this high and "blind" area. To accomplish this we bring the camera down toward the left, deflecting it a full 180° upward along the greater curvature of the stomach (photo 7) to a position in which the lens will directly face the cardia and surrounding areas. The fornix and upper greater curvature will be seen with some manipulation.

The deflection of the camera toward the fornix requires some practice. In the beginning we performed this maneuver under fluoroscopic control, but now we can accomplish it by external "blind" manipula-

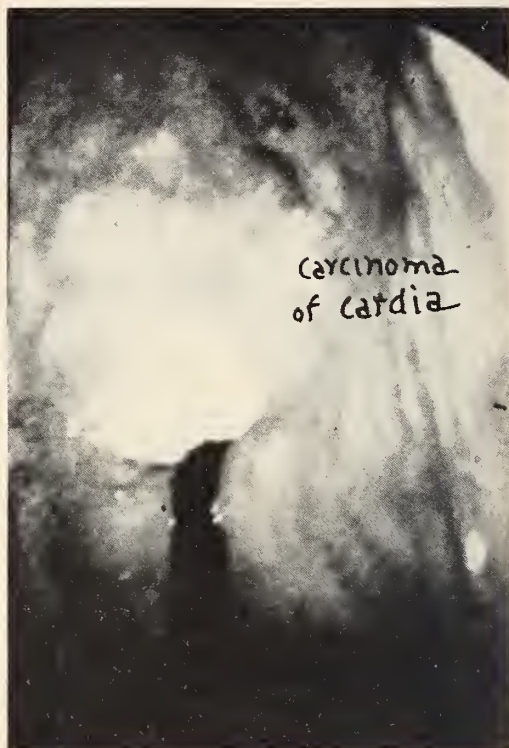


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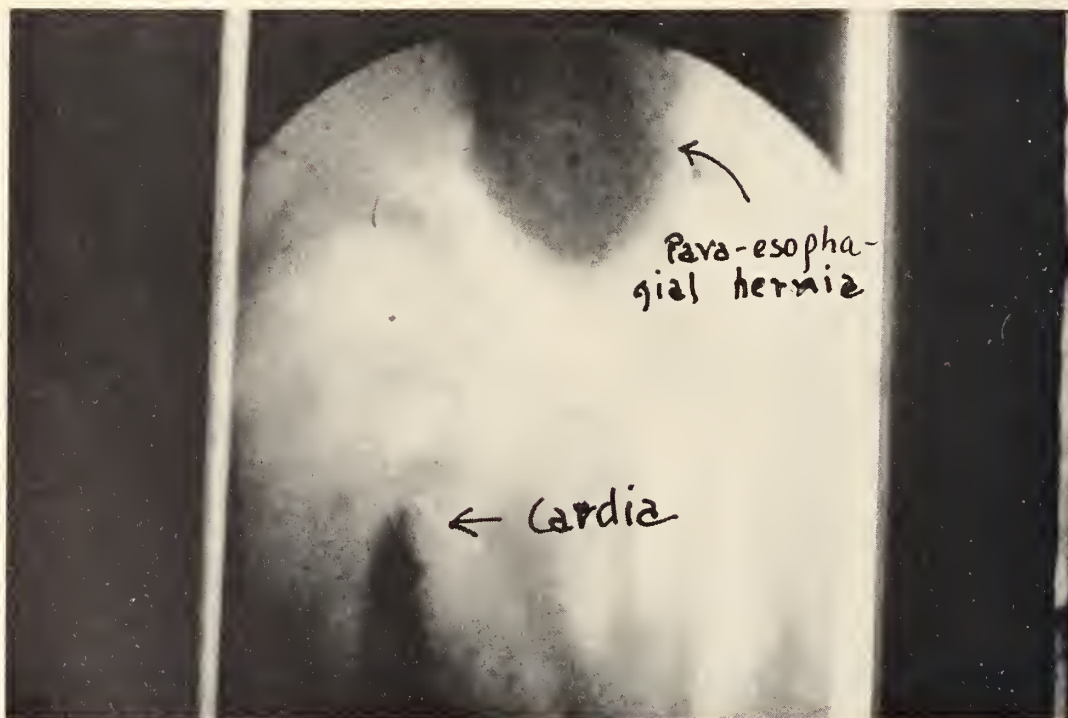


PHOTO 10.

tion only. We believe that gastrophotography of the upper third of the stomach is essential, as we have found unsuspected abnormalities in cases in which only the lower stomach was the point of interest. Photographs 8, 9 and 10 are examples of the normal and of some abnormal findings in this area.

Discussion

Gastrophotography adds a new dimension, at times the only one to give the diagnosis, to the study of gastric disease. It is not, and is not meant to be, a replacement for the conventional examination of the stomach, on the contrary, all gastrophotographic examinations are performed after careful scrutiny of the X-ray films for guidance and comparison. Again, and in spite of the fact that the lesion or lesions may be evident, we do not commit ourselves into giving a definite gastrophotographic diagnosis until all other clinic, roentgenologic and laboratory examinations have been considered. At times we may wish to repeat the procedure for confirmation in difficult cases. But, with the cooperation of the radiologist, we aspire to bring at least to 95% the accuracy of the diagnosis of gastric disease.

Summary and Conclusions

We have presented gastrophotography as a new and reliable method for the study of the stomach. Color photographs by the gastrocamera, permit the visualization of lesions which, either by their characteristics, or by their position within the stomach, could not be otherwise demonstrated.

Gastrophotography constitutes a great advance for the diagnosis of gastric pathology.

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NEVER ON WEDNESDAY

More than 50 per cent of all highway deaths in 1965 occurred during the weekend from Friday through Sunday, according to the Travelers Insurance Companies.

The most dangerous day? Saturday.

Based on Travelers' reports, 21.9 per cent of all fatal highway accidents occurred on Saturday. In addition, 15.4 per cent of all traffic deaths occurred on Friday and 18.7 per cent on Sunday.

The total number of persons killed in 1965 stood at 48,500 by year's end. More than 4,000,000 men, women and children were injured. The biggest percentage of those injured in auto accidents also occurred during the weekend.

The most dangerous hours on the highway are those between 5 and 8 p.m. During that time, nearly 20 per cent of all fatal accidents occurred. This also holds true of the number of injured. Last year more than 19 per cent of all highway mishaps causing injury occurred during this same three-hour period. *Public Information Department, The Travelers Insurance Companies.*

THE MANAGEMENT OF HEADACHE

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HEADACHE is a symptom and has many causes. Since it is impossible to discuss all types of headache in the time allotted, this presentation will be limited to headaches having their origin in extracranial structures. By extracranial is meant the tissues covering the skull. All of these tissues are more or less sensitive to pain, but of special interest to us are the branches of the external carotid artery and the muscles of the head and neck.

Migraine and tension headaches arise from the stimulation of extracranial structures. These headaches are chronic in nature and cause much distress. They are far more frequent than headaches arising from the stimulation of intracranial structures, as in brain tumors, subarachnoid hemorrhage, meningitis and fevers, and after drainage of spinal fluid. Their recognition is dependent upon the history obtained from the patient. Elaborate diagnostic procedures are not warranted in the evaluation of the usual case. The diagnosis of migraine or of headache arising from sustained contraction of the muscles of the scalp and neck is made on its own merits and not by a process of exclusion on the basis of negative diagnostic studies.

Emotional and psychogenic factors are of primary importance in many of these headaches. This does not imply that formal psychotherapy is indicated in every patient. In the usual case brief supportive psycho-

therapy by the general practitioner is sufficient. The need for more involved psychotherapy is dependent upon the personality of the individual patient. The headache in these cases becomes one of many factors that determines the need for psychiatric treatment.

The headache of migraine is very common, and it has been estimated that there are six million migraine sufferers in the United States. However, it is difficult to make precise estimates of its incidence. Meaningful surveys would be very time-consuming.

The features of the migraine syndrome are clearly defined in the textbooks, but unfortunately this particular headache is often confused with other types of headache. The headache of migraine is periodic. It is usually unilateral but may be bilateral from the start or become bilateral. It is usually of high intensity, throbbing and aching in quality, and increased by physical and mental effort. The patient appears to be ill and prefers to be undisturbed. Nausea, vomiting and other gastrointestinal symptoms are frequently associated with the headache. The attack may be of any duration, minutes or hours. The frontal, temporal or occipital areas are common sites of the headache. Many patients have warning of an oncoming attack. Visual disturbances, including blind spots and flashes of light, frequently precede the headache. Other prodromes are described in the literature. There is a high family incidence of migraine.

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The mechanism of the migraine syndrome has been defined by Wolff and others in the past several years. The pain is due to the dilatation of branches of the external carotid artery, usually the temporal and occipital arteries, and the associated increase in the amplitude of pulsation of these arteries. Ergotamine tartrate is usually effective in reducing the amplitude of these pulsations and in so doing provides relief from the headache. Other drugs may be effective in reducing the amplitude of pulsation of these vessels, but usually not in the same predictable and effective manner as ergotamine tartrate. The visual prodromes described above are due to vasoconstriction affecting the occipital lobe and in some instances the retina.

The treatment of the migraine syndrome must be considered under two headings: 1) treatment of the individual attack; and 2) treatment in the inter-headache period. The headache is best terminated by the administration of ergotamine tartrate which can be given intramuscularly or orally. A very useful oral preparation contains 1 mg. of ergotamine and 100 mg. of caffeine in tablet form (cafergot tablets). Cafergot suppositories are also available. These drugs act as indicated in the previous paragraph. Analgesics provide less predictable relief by raising the pain threshold during the attack of headache. Many patients with migraine suffer from feelings of insecurity and are rigid, inflexible, and perfectionistic. These features must be recognized by the physician and the patient, and brief supportive psychotherapy may be useful in reducing future attacks. In recent years, Sansert, a serotonin antagonist, has been found to be effective in the prophylactic treatment of migraine. Its use should be limited to patients having frequent, disabling attacks of migraine. Contraindications to its use include peripheral vascular and coronary disease, hypertension, septic states and pregnancy.

The headache associated with sustained contraction of the muscles of the head and neck is probably the commonest type of head pain encountered by the physician.

However, since it does not produce as clearly defined a clinical syndrome as migraine it is difficult to make any precise estimates as to its frequency.

In this type of headache the patient complains of aching sensations or tightness in the head and neck. The discomfort is poorly localized. No aura is present. The patient frequently complains of a constant headache that is not relieved by any medication. Anxiety may be evident. Frequently there is an unawareness of these strong muscular contractions.

Steady contraction of any muscle may give rise to pain and tenderness. The head and neck muscles are most frequently involved from a clinical standpoint. Difficulty in diagnosis arises because these sustained contractions often do not reach the level of consciousness.

The mechanism of the head pain must be carefully explained to the patient, and since the pain is commonly associated with anxiety, psychotherapy may be indicated. Tranquilizers by alleviating the anxiety indirectly reduce the muscle contractions. It must be remembered that the pain and discomfort of sustained muscular contraction may be superimposed upon any type of head pain.

Post-traumatic headache is frequently due to the sustained contraction of the muscles of the head and neck. In this type of headache it is not unusual to find an underlying psychoneurosis.

The mechanism of the headache in hypertension is similar to that of migraine. Many hypertensives do not suffer from headache. There may be no correlation between the level of the blood pressure and the incidence of headache.

In this presentation the more frequently encountered headaches were briefly described. Time did not permit the discussion of all varieties of headache. The proper evaluation of the symptom is dependent upon the physician's knowledge of neurology, internal medicine and psychiatry. In closing, I wish to state that there is no substitute for a good history in this process.



The General Use of Psychotropic Drugs

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IN 1952 chlorpromazine (Thorazine) was introduced as a potent new pharmacological agent for the treatment of psychiatric disorders. Since then numerous analogues and other new compounds have been synthesized, tested and placed in clinical usage. These are the psychotropic agents and they allegedly have the capacity to modify subjective sensations such as fear, apprehension, sadness and euphoria without seriously impairing cognitive functions. The hoped for result is to calm the anxious or overactive patient without putting him to sleep and to energize the depressed patient without putting him into orbit. In this way the psychotropic drugs are said to differ from the sedative, hypnotic and stimulant drugs previously available.

Considerable effort has been made to establish the psychotropic drugs as a new class of drugs. Any pharmacological or ancestral relationship to drugs classified as sedatives, hypnotics, stimulants and ton-

ics has been disavowed. The result of this rebellion has been the designation of the new drugs as: tranquilizers, ataractics, normalizers, antidepressants, mood-elevators, calming agents, antipsychotic agents, antineurotic agents, and psychosupportive agents. An obvious reluctance to term these new substances as "drugs" is evident. The term agent seems to produce less of a medicinal aura, and to convey to physician and patient that the psychotropic agent is so benign and sensible to use that it is almost physiological. Kind of like an emotional vitamin to take with your shredded wheat in the morning.

At the present time there are over 90 psychotropic drugs marketed in the United States. In the general medical journals 25% of drug advertising is devoted to the ataractics and antidepressants. The percentage of patients receiving these drugs is inexact, but from my discussions with non-psychiatric physicians I have concluded that it exceeds 50%.

The above figures make obvious that if there is something specific being treated by the prescription of these drugs it is more common than any other clinical entity,

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with the possible exception of the common cold. Also, it is obvious that the psychotropic agents are not curative. The psychotropic agents to be maximally effective must be prescribed or not prescribed after a diagnosis is arrived at, not merely to deal with a patient's demands or subjective complaints. Indiscriminate use leads to therapeutic failure, patient abuse and undesirable complications. This has to be expected from "drugs," particularly those that alter behavior. It is presumed, that if the psychotropic drugs have significant biological properties that alter behavior, their usefulness will be greatly enhanced by knowing when to use them and when to stop using them.

The first symptom complex to be considered is that of anxiety, the most frequent reason for prescribing the psychotropic agents.

Anxiety Reaction

Anxiety is a non-specific term often used interchangeably with such words as fear, foreboding, apprehension or dread. All apply to an unpleasant sensation but are not necessarily pathological and, in fact, may be biological protective devices and highly important to human motivation. They are not necessarily indications for prescribed drugs and should not be equated with the concept of anxiety reaction which is a collection of recognizable symptoms and signs that might better be termed a syndrome.

The patient with an anxiety reaction typically presents with complaints of prolonged or intense fearfulness and uncertainty for which there is not any obvious external cause. These are accompanied by symptoms reflecting increased autonomic activity such as shakiness, weakness, butterflies in the stomach, inability to swallow, inability to breathe, palpitations, or ringing in the ears. To confirm the diagnosis behavioral or physical signs should be apparent such as obvious restlessness, a wide-eyed stare, dilated pupils, rapid pulse, excessive sweating or a rapid, deep respiration.

One might surely be suspect of the pa-

tient who gives an appropriate list of symptoms while lounging in the most comfortable reclining chair in your office. Let's say that patients with a significant anxiety reaction usually pick the hard chair and at least sit up straight.

Because this patient has not been able to explain his symptoms to his own satisfaction it is common to have fears of cancer, heart disease or other life-threatening processes. Such fears resist reassurance, even after thorough medical evaluation. The clinician should not be distracted by the patient's insistence that the cause of his problems is physical, for it is possible with careful questioning to elicit life situations that are the actual precipitating stresses. The death of an acquaintance who is the same age, an increase in work responsibilities, having to care for a sick child, are all examples.

Being able to help the patient define the precipitating stress is in itself therapeutic, as is the physician's ability to explain that an anxiety reaction is a recognizable entity with symptoms and signs comparable to such medical entities as peptic ulcer or pneumonia. Also, the physician should explain that there are a number of medications that will help him to control his symptoms. Initially the drug of choice is one of the minor tranquilizers such as chlordiazepoxide (Librium) 10 mg. t.i.d. which can be increased to 25 mg. q.i.d., if required. Side effects of drowsiness and ataxia tend to occur with dosages over 100 mg. per day, particularly in the elderly patient. Other recommended minor tranquilizers include hydroxyzine (Vistaril), oxazepam (Serax), meprobamate (Miltown or Equanil), and diazepam (Valium). It is advantageous to choose one or two of these compounds and become familiar with the dosages, limitations and side effects. In the patient with an anxiety reaction it is of value to instruct him to initially take his medicine regularly 3 times per day whether he needs it or not. He should then be seen weekly until his symptoms have diminished, at which time the tranquilizer can gradually be reduced. Should there be

an occasional exacerbation of symptoms, it often can be controlled by instructing the patient to take his medication again for 2 or 3 days.

In cases of an unusually severe anxiety reaction with symptoms that are literally immobilizing the patient, one of the major tranquilizers should be utilized. An example would be chlorpromazine (Thorazine) in relatively low dosages of 10 to 50 mg. t.i.d.

If an anxiety reaction is not resolved by this approach of regular visits and medication in 6 to 8 weeks—give or take an occasional exacerbation—a reappraisal of the situation is warranted. One may be dealing with a global type of anxiety that is indicative of an impending psychotic process. Then there are those patients who are chronically anxious and who neglected to inform you of the fact that they have been shaky and sweating through their shirts since an infantile trauma consisting of their mother sneezing while she was nursing them.

Yet another problem is the patient who proclaims great anxiety but shows few signs. Her problem increases the more interested the doctor appears. When you make the diagnosis of anxiety reaction, prescribe a new psychotropic drug and tell her to come back in a week, her anguish seems unduly lightened. When she calls the next day and indicates that you have helped her where other colleagues, even specialists, have failed—well—you feel this must be the reward that makes it worthwhile to be a healer of the sick. Improvement may still be present after a week but is fading by the third visit. Complaints return and a new psychotropic agent is tried. Response to this is short and helped the palpitations, but not the butterflies. Another agent and then a combination is tried. The suggestion of stopping medication is met with cold intolerance. The suggestion of cutting down appointments is met with new complaints that sound like Brucellosis or carcinoma of the everywhere. The final outcome is an anxious physician who wonders if he's missing something organic in the patient and who knows full well that he's missing something in himself.

He's been drained by the dependent patients. For this patient the psychotropic drugs have great symbolic value and little pharmacological value. Under these conditions excessive use of drugs is frequent and it takes great personal courage and endurance, and a good office nurse to not give in to the patient's constant demands for more tranquilizers.

Depressive Reaction

All people have felt sadness, but this is not the same as a depressive reaction. The tendency to equate sadness with depression leads to such free advice as "buck-up, we all feel down in the dumps once in awhile," or "stop worrying and think of someone besides yourself."

The symptoms of a depressive reaction are surprisingly consistent from one patient to another. Onset is usually insidious, and may follow by some length of time a family emergency or death that was apparently adjusted to satisfactorily. Disturbance of sleep pattern characterized by early morning awakening is common. This is in contrast to the anxious patient who has difficulty going to sleep. There is loss of appetite, loss of energy, loss of interest—all of which may precede more well-known symptoms, such as sadness and self-destructive thoughts.

On examination signs of depression are those of apparent fatigue, dejection and hopelessness. Thoughts and actions come slowly and often convey an impression of helplessness. Such an individual may claim to be inadequate as a wife or on the job. Physical complaints are common in the older person. Suicidal thoughts or fears may be mentioned spontaneously, but if not, it is better to inquire directly than skirt the issue.

A good indicator for the severity of depression is the patient's sleep pattern. If there is consistent awakening at 2:00 A.M. or 3:00 A.M. with an inability to resume sleep a serious depressive reaction exists or is in the making. Frequently, these early morning hours are filled with fear and self-destructive thoughts. In such cases hospitalization is required.

In the less severe depressive conditions those psychotropic drugs which are alleged to have a specific antidepressant component may be utilized. Their action is neither as specific nor as prompt as that of the tranquilizers in controlling anxiety. Instruction to the patient should include the information that a therapeutic effect may not be evident for two weeks. It is not unheard of for the patient at this point to imply that he'll either be dead or better by that time.

Imipramine (Tofranil) and amitriptyline (Elavil) are examples of the antidepressant drugs which can be given in dosages of 75 mg. to 100 mg. a day with gradual decrease in dosage but continued use of the drug, for one to three months after symptomatic relief. Other antidepressants are desipramine (Pertofrane or Norpramin), isocarboxazid (Marplan) and tranylexpropamine (Parnate).

The use of direct central nervous system stimulants such as the amphetamines in the treatment of depression is contraindicated. With these agents any elevation in mood tends to be followed by a proportionate depression of mood. This can lead with ease to the increased intake and habituation to these compounds which is a prevalent problem in current psychiatric populations.

Alcoholism

Another frequently encountered symptom picture is that of alcoholism.

Alcohol is the oldest known tranquilizer and, unfortunately, many people feel none of these new-fangled psychotropic agents can touch it.

The symptoms of alcoholism resist recognition due to the patient's unawareness or refusal to admit they exist. When symptoms appear the pattern is to control them by more of the same thing that made them appear. The eventual result is a collection of clinical signs that are subtle and escape detection by those closest to the alcoholic. Transient episodes of tremulousness, gradual avoidance of social situations and companionship, an apparent intentness to life that takes precedence over previous pat-

terns of living, erosion of work performance and, eventually, obvious neglect of responsibility.

Treatment at this point, and at any other time with the alcoholic, must include the establishment of a relationship that will result in the patient continuing to come to the physician; and the early establishment of the fact that the patient cannot drink under any circumstances.

The tranquilizers are useful during early treatment to control anxiety and tremulousness. Chlordiazepoxide (Librium) or, if necessary, chlorpromazine (Thorazine) are examples. Their prolonged use is of unproved value. Often an hypnotic to assure sleep is also required.

In the patient showing symptoms of chronic alcoholism as in the syndrome of delirium tremens, hospitalization and a full regime of medical treatment (fluids, vitamins, anticonvulsants) is mandatory. The psychotropic agents are equivalent, if not superior, to paraldehyde and the barbiturates in providing required sedation. In the first twenty-four hours intramuscular chlordiazepoxide (50-100 mg. every 4-6 hours), or chlorpromazine (50 mg. every 4-6 hours) are very effective. Change to the oral route can then usually be made.

Chronic Brain Syndrome

Another indication for the psychotropic agents is in the elderly patient showing findings of a chronic brain syndrome.

The elderly patient with cerebral arteriosclerotic changes or senile dementia presents a problem in management whether it be in a home setting, nursing home facility or in the general hospital. Irritability, restlessness, suspiciousness, confusion and distractibility are usually the signs that require control. These problems may require control to preserve the patience and good will of family members or personnel who are caring for the patient. In many instances, however, symptom control constitutes an emergency as there is a co-existing surgical or medical condition that requires rest and, at least some patient cooperation.

The major tranquilizers are indicated

in these situations. Thioridazine (Mellaril) beginning at 25 to 50 mg. t.i.d. and increasing as needed, or until side effects occur, has proved effective. This and other phenothiazines have more predictable effects in the aged patient than the barbiturates.

In the aged patient only enough drug for reasonable management is indicated as symptom disappearance will usually not occur. Sedation to the point of anesthesia is not warranted in an elderly, dyspneic, tremulous, frail woman, even if she is threatening to strangle the nurses or the patient in the next bed.

Schizophrenic Reactions

Perhaps no clinical syndrome eludes clear description more successfully than the schizoid or schizophrenic disorders. It may not be difficult to recognize that psychotic patient who has grossly neglected his personal appearance, is engaged in bizarre activities, is talking back to his own hallucinations, and expressing beliefs that the FBI is after him. However, many psychotic patients are suffering from a much less inclusive psychosis or their symptoms are partially covered over. For example, there are a considerable number of such patients who can withdraw sufficiently to be able to appear intact during the brief periods they are with people. They may succeed in doing this by living alone and by changing jobs frequently. In the less chronic schizophrenic individuals there is considerable tendency toward acute exacerbations followed by remissions, during which the patient may be relatively asymptomatic.

The symptom history obtained from the schizophrenic patient, even during a remission, is non-specific. Frequently, there is complaint of being different than other people or a series of accounts where the patient has felt rejected or detached in work and social situations. They may describe excessive involvement in unusual causes and increasing disinterest in home and work responsibilities. In other patients there may be little else except excessive concern with physical problems. Such complaints may have a very unusual quality

to them such as the conviction that there is gas under the skin or the impression that there is something crawling inside their brain.

In many cases the patient will keep his symptoms to himself as he realizes they are unusual or has already attached some meaning to them that he must not reveal to other people. It is such individuals that will only discuss such things after multiple office visits.

The signs noted in the schizoid or schizophrenic patient are those of great vagueness in providing historical data. Such patients will be indifferent to efforts to get them to be more specific and the physician can detect a feeling of frustration in himself because he just can't get a straight answer. Rather catastrophic or serious thoughts may be expressed with indifference, including the patient's thought of harming himself or someone else. Excessive irritability is common.

In a number of cases the schizophrenic patient is able to continue functioning in the home and community. Partial remission may have been accomplished by psychiatric hospitalization but residuals remain that require regular visits to a physician who can offer some understanding to the patient. This same physician can be of considerable assistance to this patient by judicious and consistent use of medication.

Numerous clinical observations and studies have emphasized the benefit of the schizophrenic patient continuing to take one of the psychotropic drugs for an indefinite period. In most cases the phenothiazines are the drugs of choice. A maintenance dose of chlorpromazine (Thorazine) may be 50 to 150 mg. t.i.d. or trifluoperazine (Stelazine) 2 to 5 mg. t.i.d. Patients are able to function satisfactorily while taking this quantity of medication. Other examples of drugs effective in this type of patient are: perphenazine (Trilafon), thioridazine (Mellaril) and fluphenazine (Prolixin).

At times a combination of drugs can be utilized, but this should not be the usual practice on the out-patient level.

Since a number of schizoid patients ex-

hibit depressive features in addition to their primary disorder it has been suggested that one of the anti-depressants be an adjunct to the basic phenothiazine in these instances.

Undesirable Effects

The frequency with which the psychotropic drugs are used requires a clear awareness of side-effects and possible complications of their use. Because they produce temporary relief of tension or represent an offering of help to chronically unhappy people it is not surprising that dependency on the drugs be a cause for concern. Reports of the development of physical dependence have been made but this problem is surpassed by the psychological habituation that can occur. In the acutely ill psychiatric patient it is suggested that prescriptions be made for only one or two weeks' supply and that they not be refillable, and that patients requiring prolonged use of these drugs be seen on a regular basis to determine the course of the psychopathology.

The patient must be cautioned about combining the psychotropic agents with alcohol or other drugs. Alcohol need not be forbidden, but should not be taken concomitant with your favorite tranquilizer. Excessive drowsiness or hypotension may make your patient end up under the table before dinner is served. Antihistamines, barbiturates, other tranquilizers, hypnotics and analgesics are all capable of producing unpredictable reactions.

Prolonged or monotonous tasks such as toll road driving when combined with a tranquilizer may result in drowsiness or inattention, and are to be avoided.

All of the psychotropic agents should be used with care in the debilitated or aged patient and whenever there is evidence of chronic renal, hepatic or cardiovascular disease.

The minor tranquilizers generally have minor side-effects. Drowsiness, light headedness and nausea may occur with any. The major tranquilizers have a greater hypotensive effect and more frequently can affect the hepatic and hematopoietic systems. With very prolonged use skin and ocular changes occur. Many patients, when on phenothiazines, sunburn with ease and should be warned of this potential.

The anti-depressants may precipitate hypertensive reactions. Severe atropine-like reactions have resulted from the combined use of monoamine oxidase inhibitors and other anti-depressants. Excited states or manic-like behavior have rarely been reported.

It seems inevitable that the number of psychotropic drugs will increase, as our culture and society does not seem to be on the road to greater tranquility. It is probable that the effects of the newer agents will be more specific and perhaps more profound. This may give many troublesome patients a suspended kind of relief from difficult life problems, but it can only result in greater dependence on the physician and his judgment as to when and how much of a drug should be used. In general, this goes along with the edifying but frightening realization of the general population's demand for medical attention. It is important that we do not oversell our wares and talents.

Tranquilizers in General Practice: Some Practical Hints

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Introduction

IN THE FOLLOWING, merely the phenothiazine tranquilizers, also called the major tranquilizers, are being considered and discussed with regard to their feasibility to the general practitioner. This paper is based on addresses given on this subject to County Medical Societies. It is not geared at the expert, but at the general practitioner, a large component of whose practice consists of individuals primarily suffering from so-called functional disorders. This may be a neurosis or even a fairly well controlled psychosis.

Mode of Action

The action of the major tranquilizers is believed to take place mainly in the mesencephalon and dienecephalon. It is here where apparently incoming unpleasant physical as well as emotional stimuli are attenuated chemically. Thus, their corticalization is either considerably diminished in quality or quantity, or abolished altogether. It is assumed that phenothiazines raise the pain threshold for physical pain and also to a certain degree prevent the patient from reacting to unpleasant and disturbing emotional stimuli.

Indications

Originally tranquilizers were mainly used in patients who acted out violently, used profane language and were destructive. As time went by it was observed that the pa-

tient who lives a withdrawn existence in a mental hospital also responded to them. Our explanation for the latter was as follows: Withdrawal is the result of overwhelming fear and anxiety. An animal which is scared frequently becomes "frozen." The withdrawal state of the catatonic schizophrenic has been frequently compared with that of a "frozen" person. If one succeeds to treat this overwhelming fear and anxiety at the site of the mesencephalon and dienecephalon, the patient no longer needs to withdraw. Consequently, approximately 70% of withdrawn patients regain contact after being treated with phenothiazines. The phenothiazines, however, are also helpful in ambulatory anxious and tense patients and patients who suffer from psychosomatic illness.¹ They appear to be especially beneficial in conditions such as globus hystericus, "neurotic heart," and gastrointestinal disturbances for which an organic basis cannot be found. Here the patient is primarily relieved of unpleasant emotional stimuli and experiences and apparently no longer has the need to express his anxiety through his organs.

Reports are now appearing in the literature^{2,3} indicating the beneficial effects of phenothiazines in depressions. This is revolutionary since heretofore phenothiazines had been suspected of even causing depressions. Experience has shown that in cases of agitated depressions and depressions going along with so-called tension states or over-all anxiety, as the anxiety responds to the phenothiazines, the depression "lifts" with it.

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Dosages

In giving any kind of medication the physician should not waste time and money on subclinical dosages. Dosages have been standardized and oriented toward chlorpromazine (Thorazine), this being the first and oldest phenothiazine tranquilizer. Thioridazine (Mellaril) for practical purposes has the same strength as chlorpromazine. Tables of comparison are available with regard to the remaining phenothiazines and their relative strength. A highly disturbed mental patient, whether he be overactive or withdrawn, usually responds to 200 mg. of Thorazine or Mellaril by mouth, four times a day, or 50 mg. i.m., t.i.d., or the corresponding dosage of whichever tranquilizer is chosen. Approximately 70% of such patients have shown favorable results with this treatment. The one with complaints of anxiety and tension such as outlined above usually responds favorably to 75 mg. of chlorpromazine or thioridazine three times a day. The same dosage holds for ambulatory patients who are "depressed." Care should be taken to inform the hospitalized as well as the ambulatory patient that he may expect a certain degree of drowsiness and/or fatigue during the first days of treatment. This usually alleviates additional anxiety which the patient may develop over this. Experience has shown that this drowsiness usually disappears after several days. An initial period of varying dosage may be necessary. In such cases of dosage manipulation one should place the highest dosage at night and the weaker dosages during the daytime. Experience has further shown that as the treatment on a given dosage continues the patient eventually, after several weeks or months, begins to complain of undue tiredness. This is an indication that the dosage has become too high and that "as the patient returns to normal," it may now be decreased. In such cases one does wisely to first discontinue the mid-day dosage, then the morning dosage, but to maintain the evening dosage for some time. While phenothiazines are not somnorifics, obviously their tranquilizing effect during

the evening hours is instrumental in relaxing the patient to a degree that he can find sleep. Usually a carryover of this beneficial tranquilization may be noticed during the next morning. It should be kept in mind that a brain suffering from organic disease, such as cerebral arteriosclerosis, is more sensitive and needs considerably less medication.

Phenothiazines nowadays are available in most any modality, such as tablets, slow release capsules, elixirs, suppositories and as injectables. They are also available in the form of liquid concentrates which may be added to a beverage, unbeknown to the patient, by another person attending to him. The latter modality has proven very beneficial in children and adults who "will not take their medication. . ." In this category also fall, as experience has shown, patients suffering from fairly well controlled psychotic disorders who remain nonhospitalized, but for reasons of their very disturbance, refuse to take any kind of medication. So far most of these concentrates are restricted to the use by hospitals and institutions.

Side Effects

Only the four most important side effects will be mentioned here. It should be remembered that no active drug is ever free of side effects, hence they should be expected and anticipated:

- 1) The most common side effect is that of a parkinsonism-like condition, where the patient starts drooling and where he develops other symptoms of "shaking palsy." This side effect is not alarming and for practical purposes always disappears on discontinuation of the drug and/or on adding an anti-parkinsonian drug. I, personally, prefer discontinuation of the phenothiazine. One reason for this is that by the time the patient develops "parkinsonism" he has usually reached considerable psychiatric improvement on the medication. The drug may be reinstated several weeks after the cessation of "parkinsonism," and in many instances "parkinsonism" has not recurred at such occasions.

2) "Jaundice" had been a very disturbing side effect in the beginning of the phenothiazine movement, but has become rather rare of late. It developed that this complication was due to an obstruction of the bile canaliculi. This complication likewise is relatively harmless and ceases on discontinuation of the drug. The important factor is to recognize such "jaundice" as due to phenothiazines and not perform unnecessary surgery on the biliary tract.

3) Skin manifestations: A varying number of skin manifestations, particularly neurodermatidites, have been observed in connection with phenothiazines. Discontinuation of the drug in question is the treatment of choice, combined with symptomatic measures. A considerable number of patients, male as well as female, are sensitive to sunlight while ingesting phenothiazines. It is for this reason that they are advised to cover their exposed skin or to avoid the sun altogether and stay in the shade during the warm season.

4) The most dreaded of all complications is that of agranulocytosis. This condition is frequently fatal, but has been so rare, statistically, that it should not deprive the patient of phenothiazine treatment. In 1958 the English language literature had reported a mere total of 48 fatalities due to phenothiazine agranulocytosis among approximately 15 million individuals so treated. Treatment for agranulocytosis, of course, has to be heroic and must be in conjunction with a consultant. It is good practice to examine a patient's throat each time he is seen and take his temperature. This is much more practical than daily blood counts. However, at the discovery of a white count below 4000, medication should be stopped.

There are many other side effects, such as amenorrhea, constipation, diarrhea, hypotension, lactation, and others, none of them serious in nature; all of them disappear on discontinuation of medication.

The lethal dose of Thorazine has been determined on laboratory animals to be 24,000 mgs. for man.

Summary

The paper deals with the mode of action of phenothiazines and their use in general practice. It covers principally the so-called functional patient suffering from anxiety, tension, depression and psychosomatic diseases. Dosages with regard to these disturbances were given as 75 mg. of chlorpromazine or thioridazine three times a day, or the equivalent regarding other phenothiazines. The four most known common side effects were demonstrated. They are: a parkinsonism-like state, "jaundice," neurodermatidites and agranulocytosis.

Conclusion

Phenothiazines are beneficial and reasonably safe in patients suffering from anxiety, tension, depression and psychosomatic diseases. They should be used by the general practitioner whenever indicated. They are by no means miracle drugs and have not solved the over-all riddle of psychiatric illness. Yet, they have considerably contributed to relieving patients from unpleasant emotional experiences and conditions. They represent a symptomatic treatment for illnesses, the exact etiology of which remains unknown at this time. They have stimulated considerable research within the field of emotional illness and definitely represent a step forward in the field of psychiatry. In the hands of the experienced they are beneficial as long as the physician remembers that in addition to administering a medication he must also invest his personality.

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THE VIEW BOX

Leon Love, M.D.
Director, Diagnostic Radiology
Cook County Hospital

Patient is a 32/N/F gravida 6 para 6 admitted because of "milky urine" of 3 years duration and a 25 lb. weight loss in one year. She had occasional episodes of transient urinary retention relieved by spontaneous voiding of white clumps. She had never left the United States. Physical examination was essentially normal other than a pelvic mass felt to represent a chronic tubo-ovarian abscess.

What is your diagnosis?



FIGURE 1

(Answer on next page)

THE VIEW BOX

DIAGNOSIS AND DISCUSSION

(Continued from preceding page)



FIGURE 2

Laboratory Data.

Urine was grossly milky and could only be collected from the right ureteral catheter.

About 20 minutes after the injection of about 8 cc. of an iodized poppyseed oil preparation (Ethiodol) into a lymphatic channel on the dorsum of each foot, abnormal lymphatic channels are demonstrated in the pelvis. These channels have a dilated varicose appearance (compare to left side) and extend upward to the hilus of the right kidney. Collateral lymphatic channels are seen in the intercostal and peri-renal area (arrows) Fig. 1 and Fig. 2.

A follow-up study in 3 hours demonstrates the collecting system of the kidney as well as the urinary bladder to be filled with iodized oil indicating a direct com-

munication with the lymphatic system which accounts for the chyluria. The mechanism in chyluria is probably accounted for by increased hydrostatic pressure in dilated varicose channels which then rupture into the renal collecting system. The role of obstructive disease involving the thoracic duct and intestinal lymphatics in accounting for chylous collection is still not fully understood, as ligation of the thoracic duct in itself does not produce this effect. The most frequent etiology is filariasis which was not a factor with this patient.

Her urine revealed many refractile small spheres of chyle.

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A Little Slice of Death

John W. Lauer, M.D./chicago

SINCE ANTIQUITY man's humanity toward man has been most nobly and effectively expressed in his efforts to relieve suffering. This function has been traditionally performed by a selected person in the community usually designated by the title doctor or priest, or some combination or condensation of the two words or the ideas represented by them. This person has always enjoyed a special place in the thoughts and feelings of the segment of population he served and not infrequently he has occupied a position of importance in local community affairs, often being looked to for leadership. The art, science and practice of medicine has differentiated into various specialties, with the passage of time. The accumulation of vast bodies of knowledge of extraordinary complexity has made this a necessity. But further aging and development of our profession has likewise shown the necessity for teamwork, largely in the important area of exchanging ideas and information as well as a cooperative effort in the clinical situation.

As medicine underwent its differentiation into specialties a specific niche was reserved for and occupied by the group of pain-preventers. Unlike their colleagues in other fields their activity is less directed toward the art of healing and re-

lief of pain but is devoted to the preparation and maintenance of a patient in some state of insensibility in order that he might be effectively and painlessly treated by someone else. The advent of inhalation therapy in recent years, which is usually under the aegis of the department of anesthesia, has changed this position to some degree. But by and large the major emphasis in anesthesiology and the primary goal of the anesthesiologist remains the business of providing a loss of sensitivity to stimuli, however it might be accomplished.

In antiquity, and currently in primitive civilizations, the ingestion of roots of soporific herbs, or their products retrieved by boiling, as well as persuasion, suggestion and distraction comprise the bulk of the anesthetic armamentarium. The ancient Egyptian physicians, according to Herodotus and Manetho, not only divided medicine and practiced as specialists but used primitive anesthetic techniques such as herbs, distraction and external muscle restraint. The latter we accomplish today with curare-like substances. About 900 A.D. Rhazes, the Persian physician, prescribed chess specifically for the pain of melancholia. Friar Theodoric of Lucca is credited with discovering inhalation anesthesia in the 13th century. Esdaile, in 1846, published an article concerning the use of hypnosis in major surgery. And we all know that extreme states of fear,

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anger, lust and the ecstasy cultivated by some religious sects, can permit the occurrence of serious mutilation to escape conscious attention.

Anesthesia, again, by definition, means loss of sensitivity to stimuli but I think we can add the word "some" before stimuli and enlarge our understanding. In view of the foregoing it becomes obvious that while we can be deprived of sensitivity to some stimuli, it may well be accomplished by focusing attention on significant others. But many patients, even apparently sophisticated ones, about to experience an anesthetic look upon it from another point of view. For them it is still being put to sleep, sinking into oblivion, a little slice of death. This concept is erroneous but has relevance to our present discussion both from the physician's and patient's position. I would like to consider each separately.

Research in the not too distant past, and the current utilization of the tools that have been discovered, have made possible the accomplishment of extensive major surgical procedures with relatively slight alterations in the state of consciousness. This is usually described as light anesthesia combined with curare-like substances. But what, then, is this state called consciousness? In traditional psychiatric parlance we consider consciousness to be the state of awareness. We differentiate it from the unconscious portion of the mind wherein all information apprehended in the past is stored but unless called for is not within our sphere of attention. Many events occur in our immediate environment which escape notice at the time but can be retrieved from the unconscious at a later time. Some stored information is not available for recall because its very nature renders it unsuitable for conscious scrutiny.

The question that naturally follows is what factors are involved which recommend an external event as deserving notice in our consciousness. Much of the following material was derived from an article by W. Grey Walter, entitled "New Conceptions of Consciousness" appearing

in *Modern Trends in Anesthesia*, published by Hoeber, New York, 1958.

It is axiomatic that in the activation of living tissue such as nerve fiber, the magnitude of the response is not directly proportional to the intensity of the stimulus. But in the analysis of living mechanisms we become aware also of a stimulus strength below which no response occurs. This level of stimulus strength may be called threshold. This means, then, that between the stimulus system and the response system is a connection through which the relation between input and output is distorted by discontinuity in the curve relating the magnitudes of their respective values. Whatever else consciousness may imply it must be the joint action of many physiologic elements. An assembly of elements appropriate for conscious action is not merely a stack of parallel units with additive functions. The essence of the complexity resides rather in the diversity of afferent and efferent function linked with access to stored information which together provide an estimate of probable significance. In the upper levels of the nervous system, i.e. in conscious behavior, the concept of a threshold cannot be defined just in terms of stimulus strength but must be a measure of the probable significance of the relation between two or more sets of stimuli. Consciousness is not concerned with the response to any single event but with the connection between series of events. The threshold of consciousness, then, is not a scalar one but a vectorial one. This could account for the kind of anesthesia achieved in extreme emotional states mentioned previously.

The James-Lange theory of emotions asserts that the subjective mental state identified as "emotional" arises from awareness of autonomic changes within the body, produced in reflex fashion by an exciting, alarming or dangerous combination of stimuli. A person who notes in himself the signs of fear or rage might in turn become more fearful or more enraged. Such are the consequences of the stimulus. Similar considerations might be applied to

other aspects of behavior. The motor response to a painful stimulus might provide the additional event required for the significance the stimulus needs to breach the conscious threshold. Therefore, the elimination of reflex responses to pain through paralysis of the motor system, which in this instance could be considered the reinforcing mechanism, prevents the pain stimulus from attaining that sufficient significance required for it to be taken notice of in consciousness. Now muscle paralysis alone is not sufficient for surgical procedures, and in fact produces a particularly disagreeable state; awareness of the whole situation without the logically essential component of muscular participation would be equivalent to impotent frustration. But light anesthesia, sufficient to efface the details of the environment, combined with muscular relaxation rendering subjective sensation incomplete is safe, comfortable and adequate anesthesia.

This method, though, has serious implications involving the anesthesiologist's responsibility in permitting "other stimuli" to filter through to his patient. We know, for example, the reticular formation makes an indispensable contribution to conscious behavior. Its very name depends upon its web-like character and the course of its distribution throughout the brain. We know too that physiologically the basis of awareness is related to the wide disbursement of information from all sense organs to many brain regions and this likewise contributes to the plasticity of brain function. It is an accepted fact that all signals traversing the reticular pathways pass at least through seven synaptic relays. On the basis of mathematical computation we can conclude that the reticular activating and controlling system is likely to be more than one hundred times as sensitive to general changes, particularly blood-borne agents, as any individual nerve cell. The differential may well be greater in the case of the nerve cells in the cerebral cortex. The basal and midline structures in the brain are particularly vulnerable to external assault. In the case of trauma and

what has recently been described as centrencephalic seizures, consciousness is lost quickly and completely and there is often also some degree of retrograde amnesia. In both of these conditions there is substantial evidence of a disturbance localized to the basal and central regions of the brain. On the other hand, we know that severe and extensive damage or disease in the cerebral cortex or subcortical white matter can occur with relatively little effect reflected in consciousness or memory. Surgical procedures and accidental trauma has resulted in the ablation of almost an entire hemisphere with little or no apparent alteration of awareness or orientation. We know, too, that in the modern methods of light anesthesia changes in electrical brain activity as monitored by the electroencephalographic methods are often so slight as to be hardly outside of normal. And so it seems probable, or at least possible, that with the more modern methods anesthetic agents may have little effect on the cerebral cortex. There is sufficient reason to believe that most of their action is probably exerted by way of the non-specific afferent systems in the thalamus and brain stem. Yet it is within the cortex where information is no doubt ultimately integrated and probably stored. Pediatric neurologists teach us that the establishment of a regular electrical discharge from the cortical areas is a reliable indicator that the infant is capable of beginning active, meaningful thought processes. This would seem to suggest, then, that if the normal electrical discharges from the brain, if the normal brain rhythm was altered sufficiently such as can occur in very deep anesthesia, it would be improbable that the patient would be capable of thought processes in the ordinary sense of the word. But I would like to call your attention to an article that appeared in the *British Journal of Anesthesia*, July, 1965, entitled "States of Awareness During General Anesthesia" by D. W. Levinson, Johannesburg, South Africa. A study was described wherein ten patients, all over 21 years of age, in whom hypnosis could be induced were anesthe-

tized with thiopentone, nitrous oxide, oxygen and ether for dental operations. The subjects were informed that hypnosis would be used later to explore their feelings about the operation. Encephalography was used to monitor the depth of anesthesia throughout each operation and when the record consisted entirely of irregular slow high voltage waves indicating very deep anesthesia, the anesthesiologist stopped the operation with the following words: "Just a moment. I don't like the patient's color, much too blue. His lips are very blue. I am going to give a little more oxygen." The anesthesiologist then paused, hyper-ventilated the lungs, and after a moment or two said, "There, that's better now. You can carry on with the operation." The theater and ward staff were warned not to discuss any aspect of the operation with any patient.

One month after surgery the patients were interviewed. All could remember entering the anesthetic room and receiving an injection, but none of them could recall anything of the operation and their first memories postoperatively were of waking in the Ward. The patients were then hypnotized and regressed to the actual operation and a tape recording was made of the patient's description of the events during anesthesia. Of the ten patients four were able to repeat almost exactly the words used by the anesthesiologist. A script had been prepared which the anesthesiologist read from and the tape recordings were compared with the script. Four patients remembered hearing something or somebody talking and some identified the speaker as the anesthesiologist, but all in this group displayed marked anxiety and either wakened from hypnosis or blocked any further investigation. The remaining two patients denied hearing anything. The author concluded that it would seem in the light of this experience that even patients who are deeply anesthetized retain memories of events occurring during anesthesia which can be described under hypnosis a month after the event. Tracings of an electroencephalogram that was carried out at the time indicated that as the suggestion was

given there was suppression and subsequent augmentation of the slow waves. Yet the irregular slow waves in the tracing seen just before the suggestions indicated third plane, third stage, surgical anesthesia. Another interesting point he noted was that the change in the electroencephalographic record occurred just before the anesthesiologist began to speak when complete silence reigned in the operating room as the staff waited for the anesthesiologist to read his script.

In view of the fact that environmental auditory stimuli can be perceived and stored quite without the patient's awareness when he is in deeper layers of anesthesia, one can hardly but wonder the number and kind of sensory impressions that might intrude into the patient's unconscious when he has been maintained for relatively long periods of time in the stages of light anesthesia where there is no indication electrographically of suppression of cortical activity. I have little doubt that some of the patients you anesthetize in your daily activity might fall under the general heading of neurotic and probably a substantial number in the classification of borderline psychotic. As I stated somewhat earlier, this method no doubt has serious implications involving the anesthesiologist's responsibility in permitting other stimuli to filter through to his patient.

It seems that the course of our discussion has brought us to the consideration of the question of anesthesia from the patient's position. While I can promise you that you will meet as great a variety of attitudes as you will number of patients, I have found three rather frequently occurring, and sometimes disturbing, patient attitudes toward the prospect of experiencing anesthesia.

The first of these I consider the hysterical-dependent-depressive type. This particular combination of traits is not infrequently found in females who are nearing the end of their twenties or who have begun the experiment of the thirties. This particular age and sex group does not have an absolute corner on the market of these traits, but they do seem to provide a fertile field in

which they may reside. This type of patient looks longingly toward being anesthetized and avidly seeks a brief respite in oblivion. Perhaps it represents in some instances a more profound part of the total rest they plan to enjoy while being in the hospital. It is possible, I suppose, that their seeking out a little slice of death might in some fashion portend of a deeper unconscious wish for the final escape into the permanent larger slice of death. Don't be surprised if at your preoperative visit your plan to reassure them that the anesthesia will either be regional or one of very light sleep might cause them to register disappointment. If this happens to occur, do not be dissuaded from the planned purpose of your visit but be certain to go into extensive detail with this kind of patient explaining exactly what they can expect in the post-anesthesia period. These patients usually have a companion attitude which is in the service of defending against anxiety and they entertain a most extraordinary kind of unfounded faith in all of the personnel concerned with the operating suite. But if this faith were truly a real thing one would think they would not have to broadcast it. It is usually associated with some fantasies that they do not disclose and these little conscious dreams relate to their expectation for the post-anesthetic period. Woe be to the doctor if the reality does not coincide with those fantasies. A fuller explanation of what they might expect in the line of discomfort before the task is initiated might save you from a variety of disparaging remarks after it is finished. If they become too sorely disappointed in their expectation it tends to encourage regression and one is then confronted with a whining, demanding, semi-bitter, overly incapacitated patient whose convalescence is sometimes markedly prolonged.

The next most common type of potentially difficult patient to deal with in this area is the one who combines a bright intellect with compulsive traits and a mild air of suspiciousness. This patient would really prefer to remain awake during the

procedure. In the first place he has dreadful fears about the loss of control of situations under any circumstances, but the loss of consciousness is almost more than he can bear. This patient is never thoroughly convinced that the anesthesiologist or surgeon or anyone else is really as competent as he might be since his ability to trust usually does not extend beyond the surface of his own skin. In your preoperative visit to this patient you will probably be quizzed on chapter and verse of your procedures, but at least an explanation to him will give you a feeling of reward since at the end of an interview that would take not much more than three times as long as you spend with anyone else, at least you feel that he has understood what you have said. The fact that he may not completely believe it is another question. These people constantly worry that if the surgery is to be performed upon one side of their body it may well be done mistakenly on the other side if they are not awake to direct things. You might think that this person would be far better off if he were to have spinal anesthesia, but since his great unconscious fear is related to castration anxiety, he tends to displace this toward fantasies expressed in terms of fear of permanent paralysis of his legs and by the time sensation and movement have returned he has usually sought the reassurance of everyone he can contact in the vicinity of the hospital. Interestingly enough a companion attitude that he usually has is one of total denial of fear or any apprehension about the illness or the actual surgical procedure that is to be performed. If this protest is made a little too loud and repetitively prior to the procedure, do not be surprised if in the post-anesthetic period he begins to deny on a grander scale including the fact that he has been ill and operated upon at all. The natural regression and threat to a delicate psychobiological balance that might be associated with the anesthetic and post-anesthetic period is sometimes sufficient to disjoint this type of personality altogether. One favorable factor about these people is that when they do recover they usually

have nothing but the best to say about all their doctors since they would hardly let it be known or even admit to themselves that they had anything but the best at any time.

The third type of patient frequently encountered who might be a source of difficulty is the generally anxious one. Now this person fears going to sleep but is absolutely terrified at the prospect of staying awake during the operative procedure. As your preoperative visit with him progresses though, you will see he actually has the fewest questions to ask and is really very interested in someone else making the decision for him as to whether or not he will have a general anesthetic. Now, the degree of anxiety noted in these patients may be just slightly more than normal, and all patients facing the operating room have some apprehension, or in other instances it might verge upon panic. In any case these are usually the easiest patients to deal with

and when you notice a little more than the anticipated amount of apprehension, permitting him, and in fact encouraging him to verbalize his anxieties, will help him immensely and will provide you with a co-operative and grateful patient. Once the immediate discomfort has subsided from the post-anesthetic period you can almost count on it that this kind of patient will have no complaints for he is so happy that the ordeal is ended he is willing to drop further discussion and go home.

The foregoing observations concerned with patient types and their attitudes have largely been the result of personal experience culled from six years of general practice prior to my entering the specialty of Psychiatry. As a psychiatrist I have seen many patients, both before and after anesthetics, and this experience has only served to refine and reinforce these views. I hope the foregoing will be of some help in your future dealings with patients.

SURGERY IN INTRACRANIAL HEMORRHAGE?

It is generally agreed that surgery is indicated in the treatment of intracranial hemorrhage in young individuals in whom arteriosclerosis and hypertension presumably are not the responsible factors. Operation in such cases may be lifesaving, and the results, in general, are gratifying. There is also little question concerning the advisability of surgical treatment in cases in which the clot acts as an expanding lesion with resultant increased intracranial pressure. Less clear, however, is the role of surgery in the treatment of acute intracranial hemorrhage occurring in association with arteriosclerosis and hypertension. The fact that the mortality rate of nonsurgically treated cases is now recognized to be closer to 50 than 100 per cent, as was formerly believed, has raised doubt concerning the value of operative intervention altogether. *Role of Neurosurgeon in Cerebrovascular Disease, Emanuel H. Feiring, M.D., New York City. New York J. Med. (Aug. 1), 1966, p. 1991.*

Cooperation—Medical Societies and Industrial Commissions

Ralph E. Gintz/madison, wisconsin

CONGRATULATIONS, gentlemen, upon having me here on your program. I say that not with egotism. Your invitation to me to speak on cooperation between medical societies and industrial commissions is evidence of an interest and desire to promote cooperation between our two organizations.

I have had the pleasure of meeting and hearing Dr. Howe upon several occasions when he was demonstrating and promoting cooperation between medical societies and industrial commissions. This was at the Council of State Governments Committee meetings studying workmen's compensation and rehabilitation and at annual meetings of our IAIABC—International Association of Workmen's Compensation Boards and Commissions. I also heard Dr. Howe at the occupational health section of the Work Week On Health at Madison this past February. You certainly have an excellent ambassador of cooperation and good will in Dr. Howe.

We cannot have an efficient or good administration of a workmen's compensation program without cooperation between medical societies and the industrial commission. I can speak best on the situation in Wis-

consin, since I have been associated with our industrial commission for 30 years. For many years there has been close contact between the Wisconsin Industrial Commission and officials of the state medical society. Such contacts have involved matters relating to the proper handling and disposition of workmen's compensation claims. Members of the medical society have been exceedingly cooperative with the commission in rendering various types of assistance. This has all been without remuneration from the commission or the state.

Workmen's compensation has several basic goals, but none are more important than the providing of prompt and adequate payment of indemnity for lost wages and the rehabilitation of the disabled worker. I refer primarily to medical—physical and mental rehabilitation, rather than vocational rehabilitation. Admittedly, some states do not provide adequately for either of these goals, but improvements are constantly being made. We solicit your support and assistance in obtaining such improvements.

Wisconsin has provided coverage for any and all types of accidental injuries and occupational diseases since 1919, as well as unlimited medical treatment. Our law provides that an employee is entitled to all medical treatment which may be reasonably

Workmen's Compensation Division, Industrial Commission, State of Wisconsin.

required to cure or relieve him from the effects of his injury. This means any treatment which may reasonably be prescribed by medical doctors—consultations, therapy, hospitalization, medicines, etc. The employee is also entitled to a choice from a panel posted by the employer of the doctor whom he wishes to have treat him.

Over 30 years ago the insurance companies selling workmen's compensation insurance in Wisconsin, the state medical society, together with the industrial commission, entered into a joint agreement to permit employees eligible to benefits under workmen's compensation to have a free choice of any physician who was a member of the state medical society and who had indicated a willingness to treat injured employees. The state medical society bi-annually publishes a panel or list of such doctors by counties and distributes these to employers and insurance companies at its own expense. This is a tremendous service and example of cooperation by our state medical society and it gives the workers a much wider range of selection of the doctor who is to treat them than is required by statute. The injured worker must select his doctor from the panel or the employer and insurance carrier are not liable for expense incurred for treatment. As a condition to having his name on the panel, the doctor must agree to have consultation when so requested by the insurance carrier, and to communicate with the insurance carrier in regard to any consultation in order that it might be mutually agreed upon. Exceptions may occur to this, but generally only in emergencies. As a part of the panel agreement, a state conference committee of four, 2 representing insurance carriers and 2 representing the state medical society, has been established. Its function is: A) to mediate, if possible, those cases where the insurance companies complain that the attending physician has neglected or refused to furnish the reports reasonably necessary; B) to mediate, if possible, those cases where it is complained that the insurance carriers have unreasonably interfered with what is

properly in the discretion or control of the attending physician; C) to review any situation in which it is claimed that there has been a violation of medical ethics and to refer any facts relative thereto to the Board of Censors of the county medical society; D) to mediate, if possible, differences between the attending physician and the insurance company relative to the remuneration or charges for treatment; and E) to hear any complaints relative to the competency of those serving on such panels and to remove their names if, upon investigation, it is found that the complaints are justified.

Every two years the state medical society prints an article in its annual blue book edition of the Wisconsin Medical Journal, "What Every Doctor Should Know About Workmen's Compensation." This was drafted jointly by the medical society and our office and it is revised from time to time by cooperative joint effort. The article informs doctors in some detail concerning the general requirement and procedures for treating, reporting and evaluating industrial cases.

Prompt initial and periodic medical reports are necessary to substantiate a diagnosis, the extent of disability, if any, and whether such is due to the industrial injury. Making out medical reports to assure prompt payment of such compensation as is due may be as important to the rehabilitation of the patient as the actual treatment of his condition. Failure to submit medical reports will delay compensation payments, causing financial and perhaps domestic problems leading to neurotic and other complications. Dr. Melvin N. Newquist stated at the American Medical Association twenty-first congress of occupational health at Denver, Colorado in October 1961, "While the individual physician's first responsibility is to his patient, he should cooperate in making the law work, such as in the rendering of prompt medical reports and in testifying at hearings."

Our industrial commission has for many years relied upon advisory committees very effectively—medical groups to help solve

medical issues, industrial and labor groups to help solve legislative and substantive issues. For over 30 years we have had a workmen's compensation advisory committee consisting of five members of industry, five members of labor, one person from the industrial commission, one from the attorney general's office and three insurance representatives. There are also two legislative observers, one senator and one assemblyman, one being a Republican and one a Democrat, who are appointed to this committee by the legislative council. This committee has successfully negotiated legislative and other problems and it submits a recommended package bill to our legislature every two years. We have a 1,000% batting average in obtaining passage of such advisory committee bills.

In 1931, our industrial commission adopted a schedule of disability ratings for losses of motion of the fingers and other joints of the extremities. This was based upon recommendations of the committee of medical specialists. For example, for ankylosis of the hand at the wrist in a straight position with the fingers and hand otherwise normal, the schedule provides 25% disability of the hand at the wrist as compared to amputation. Similarly, there are fixed disability allowances for losses of motion at the other joints of the extremities.

Also during the 1930's there were numerous symposiums on silicosis. Many claims for silicosis were filed by workers who became unemployed during the depression. As a result of joint studies by medical and other specialists, the exposure to this killer has been substantially reduced. This study also led to the industrial commission issuing a declaration of principles recommending preemployment and periodic physical examinations. The recommendations of the medical special committee of five doctors were included covering the medical aspects namely, the scope of the examinations, the form of the report, the providing of information to the employer and the employee, and a general statement of the conditions disqualifying the employee for work.

The industrial commission was also experiencing many controverted claims involving differences of opinion among doctors concerning the percentage loss of vision resulting from an eye or head injury. The commission sought the assistance of medical specialists and a committee of ophthalmologists was formed to evolve a medical report form and a formula for evaluating the disability of the eye.

In 1951, there was an awakening and realization to the fact that workmen's compensation was payable for loss of hearing due to prolonged exposure to noise. The provisions of our law had covered that condition since 1919, and we have a record of paying a claim at least as early as 1939. Many claims were filed in the early 1950's and the potential impact upon industry was considered disastrous. In 1953, a special medical committee of five Wisconsin otologists was formed, consisting of Drs. Meyer S. Fox, Mark J. Bach, Frank G. Treskow, Paul J. Whitaker and Charles R. Taborsky. They gratuitously devoted much time and study and recommended a formula for evaluating disability due to loss of or impairment of hearing. This was adopted by our commission. Dr. Fox who was on the committee, was also on the American Medical Association AAOO committee which was studying the same problem. Our formula was, therefore, similar to what was subsequently published in the *AMA Journal* of August 19, 1961. We have since amended our rule to fully comply with that AMA guide.

The results from the adoption of these various rules or guides have been to eliminate many cases of dispute and to obtain more prompt payment of compensation. Employees, their attorneys, insurance companies and their attorneys, understand the basis upon which disability is determined and they can more readily reach agreement without formal hearing. It is not necessary for the parties to appear before a referee or commissioner in Wisconsin when there is no issue or dispute.

Dr. Earl F. Cheit of the Institute of Industrial Relations of the University of

California stated in the publication "Medical Care Under Workmen's Compensation" published in 1962. "Some commissioners have worked out excellent relations with the medical profession. The Wisconsin conference committee has been very helpful in many areas."

Most doctors cooperate in submitting initial and periodic reports, promptly, and by appearing to testify at hearings when that is necessary. We, in turn, have endeavored to cooperate by making the reports as simple as possible and by hearing the cases as promptly as scheduled to avoid taking any more of the doctor's time than is necessary. Subsection 102.17 (1) (as) of our statute authorizes the claimant to file report of a doctor in advance of the hearing when there is a dispute. The commission serves a copy of such report on the insurance carrier previous to the hearing and it becomes a part of the record subject to the right of cross-examination or rebut-

tal. In many instances this eliminates the necessity of having the doctor appear at the hearing to testify in person.

A member of our workmen's compensation staff lectures to all senior medical students at the University of Wisconsin each year. We appear before local medical societies and other groups when requested to explain and discuss mutual problems.

We owe much to the medical profession in the administration of workmen's compensation in Wisconsin and elsewhere. I repeat there cannot be a good administration of workmen's compensation without a good two-way cooperation between the medical profession and the industrial commission. Industrial health is our joint responsibility.

I thank you sincerely, it has been a privilege to be here with you and I will be happy to answer any questions if and when our moderator indicates an opportunity.

SPASTIC DYSPHONIA

Medical literature contains little on the problem of spastic Dysphonia, a disorder of the voice. Frequent, uncontrollable and unpredictable hoarseness are the symptoms of spastic Dysphonia. Episodes may be momentary or last for minutes. The mechanics of the spasms are not fully understood, but investigators do agree that the condition is not organic. From studies made it is believed to be due to emotional trauma. When edema of the vocal cords is present it is believed to be the result rather than the cause of spastic Dysphonia. Therapy varies from patient to patient. Some treatments found to be helpful are voice retraining, which in itself does not produce satisfactory results; psychiatric counseling, tranquilizers (which are not too successful), and improving faulty breathing habits.

These methods are used in combination since individual response in each case differs. *Bernard A. Landes, Ph.D., Further Study of Spastic Dysphonia, California Medicine. August 1962.*

LEAD POISONING -- A POTENTIAL PROBLEM IN ALL AREAS

Recommendations for diagnosis and diagnostic facilities provided by Chicago Board of Health and the Illinois Department of Public Health

Norman J. Rose, M.D./springfield

LEAD POISONING has long been recognized as a problem in urban areas and recommendations have recently been issued by the Illinois Department of Public Health, the Illinois Chapter, American Academy of Pediatrics, and the Chicago Health Department, in order that medical personnel in all areas of the State of Illinois may be cognizant of the potential problem of this disease.

With the advent of summer more cases of lead poisoning manifest themselves in the Chicago area. Although this is mainly a disease of large urban slum areas, where old paint and plaster are readily accessible to small children, it can exist in smaller communities also. Because it is less common outside of large cities, and because symptoms are exceedingly variable and sometimes deceiving, it is likely to be overlooked as a diagnostic possibility. With a high index of suspicion, possibly more cases will be discovered.

Following are suggested useful diagnostic aids in a suspected case of plumbism:

1. History of pica.
2. X-ray evidence of radiopaque material in the GI tract.

Chief, Bureau of Hazardous Substances and Poison Control, Illinois Department of Public Health, Springfield, Illinois.

3. X-ray evidence of lead lines in the long bones.
4. Positive test for coproporphyrin in the urine.
5. Anemia: basophilic stippling of red blood cells.
6. Reducing substance in the urine.

The toxicology laboratories of the Illinois Department of Public Health and of the Chicago Board of Health, are prepared to provide diagnostic facilities for the diagnosis of Lead Poisoning in their respective areas. The procedures for submitting specimens to either of these laboratories are listed below. In submitting such specimens for diagnostic purposes, it is important that the outlined procedures be followed. *No specimens will be examined by the toxicology laboratory of the Illinois Department of Public Health, unless a medical history sheet accompanies the specimen and indicates one of the above mentioned diagnostic criteria is present.*

PROCEDURES FOR SUBMITTING SPECIMENS TO CHICAGO BOARD OF HEALTH (Chicago Residents)

1. For urinary coproporphyrin levels 10 ml. of urine are collected in a clean specimen tube and delivered without delay to any of the Chicago Board of Health Infant Welfare Stations or High-Risk Clinics,

or to the Chicago Board of Health Division of Laboratories, Civic Center, Chicago, Illinois 60602.

2. For blood lead determination 10 ml. of whole blood should be collected with the disposable plastic syringe into the lead free glass tube to which 1 to 2 drops of Heparin is added. The tubes should be inverted 5 to 6 times to prevent blood from clotting. This specimen properly labeled should be delivered to the Chicago Board of Health Division of Laboratories, Civic Center, Chicago, Illinois 60602. Additional information about the handling of specimen and the results can be obtained by calling Dr. L. Blanksma, 744-3839.

PROCEDURES FOR SUBMITTING SPECIMENS TO ILLINOIS DEPARTMENT OF PUBLIC HEALTH (Downstate Residents)

The Illinois Department of Public Health, Bureau of Toxicology Laboratory, is prepared to do qualitative estimations of urinary coproporphyrin levels in cases of suspected lead intoxication; also quantitative lead levels in blood, urine and other specimens by a polarographic procedure.

Procedures for submitting specimens for these examinations are:

1. For urinary coproporphyrin levels:

25 ml. of urine, to which 250 mg. of sodium carbonate has been added.

2. For lead analyses:

A minimum of 100 ml. of urine; or 10 ml. of blood.

No preservatives or anticoagulants should be added. Specimens should be collected in lead-free manner, using lead-free equipment. Specimens are easily contaminated by lead and great care must be exercised to avoid contamination from dust, soft glass, rubber, enamel-ware, etc.

Since the lead levels of isolated "spot" urine specimens can be quite variable in the same patient, a 24 hour specimen is recommended. Although 24 hour urine specimens can be collected from small children, this is not a simple procedure. In cases where it is not feasible to collect a 24 hour urine specimen, a blood or serum specimen should be submitted for analysis together with a "spot" urine specimen. The latter can be checked for the coproporphyrin level.

Additional information concerning specimens or other information related to these tests may be obtained from: The Bureau of Toxicology, Division of Laboratories, Illinois Department of Public Health, 1800 West Fillmore Street, Chicago, Illinois 60612—Telephone—Area code 312, TAylor 9-3100.

THE PENALTY OF LEADERSHIP

In every field of human endeavor, he that is first must perpetually live in the white light of publicity. Whether the leadership be vested in a man or in a manufactured product, emulation and envy are ever at work. In art, in literature, in music, in industry, the reward and the punishment are always the same. The reward is widespread recognition; the punishment, fierce denial and detraction. When a man's work becomes a standard for the whole world, it also becomes the target for the shafts of the envious few. If his work be merely mediocre, he will be left severely alone—if he achieves a masterpiece, it will set a million tongues a-wagging. Jealousy does not protrude its forked tongue at the artist who produces a commonplace painting. Whatsoever you write, or paint, or play, or sing, or build, no one will strive to surpass or slander you, unless your work be stamped with the seal of genius.

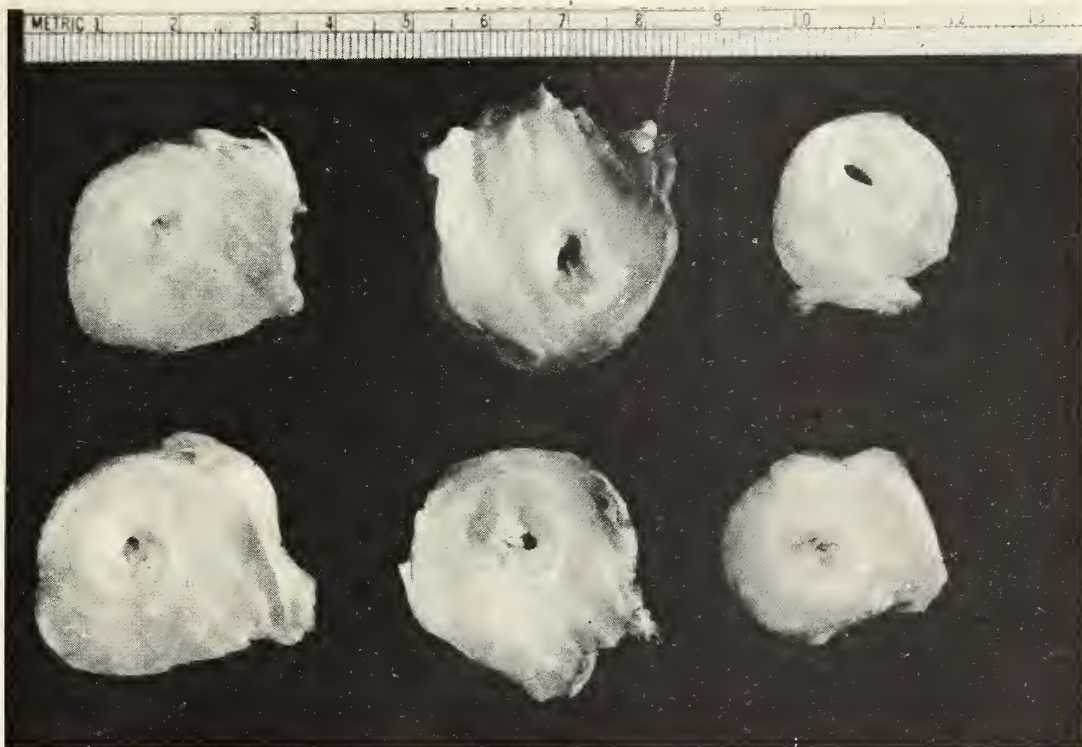


FIGURE 1. Gross appearance of multiple cut sections. Note marked thickening of wall and small lumen with inspissated exudate.

Actinomycosis of the Appendix

Joseph F. Hinkamp, M.D./glenview

ACTINOMYCOSIS OF THE APPENDIX is uncommon in general surgical practice. This paper presents a report of a case and summarizes pertinent clinical facets.

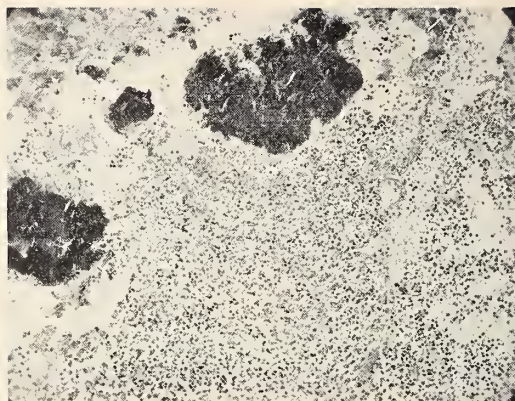
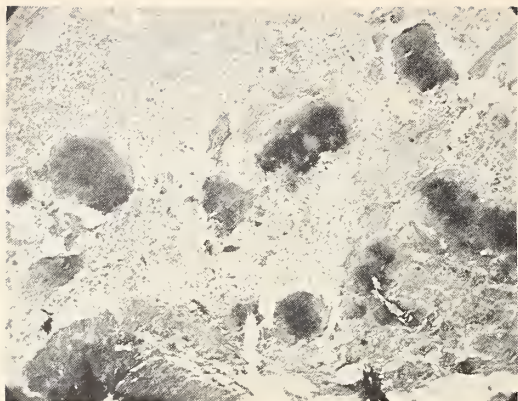
Case History

A 41-year-old white male entered Skokie Valley Community Hospital complaining of abdominal pain of 48 hours duration. The pain had localized to the right lower quadrant and had become more severe during the last 24 hours. Appetite had previously been good and there had been no change

in bowel habits. There was no history of melena, hematemesis or other gastrointestinal symptoms.

The past history was essentially noncontributory. There was no antecedant history of abdominal pain. Medical and surgical history were noncontributory.

Physical examination revealed a 42 year old white male with acute abdominal distress. The temperature was 99.4 rectally; the pulse was 100 and regular; the blood pressure was 138/78 mm. Hg. and the respirations were 14 per minute. The head and neck were normal. The lungs were normal. The heart tones were normal. The heart size was within normal limits. There were no thrills or murmurs. The abdomen was soft but there was



FIGURES 2 and 3. Microscopic appearance of actinomycotic organisms amidst a background of polymorphonuclear leucocytes (from a submucosal abscess surrounded by granulation tissue).

moderate distention of the lower abdomen. The bowel sounds were depressed but present. There was marked tenderness in the right lower quadrant of the abdomen with rebound tenderness of a moderate degree. There were no palpable masses. A rectal examination revealed tenderness in the right cul-de-sac. The genitalia, extremities and skin were normal.

The hematocrit was 45%. The hemoglobin was 14.7 gm./100 ml. White blood cell count was 11,800. The differential white blood cell count = 6 bands, 66 polymorphonuclear leucocytes, 1 eosinophile, 19 lymphocytes and 6 monocytes. A urinalysis, serology and chest x-ray were normal.

A diagnosis of acute appendicitis was made and laparotomy performed. At operation, the peritoneal cavity contained 200 cc. of a serosanguineous fluid. The appendix was enlarged nearly three times the normal width and was markedly indurated. The cecum was indurated with focal granulomatous lesions which extended to the ascending colon. The ileocecal fat pad was also indurated. The appendix was removed, but because of the cecal induration it could not be inverted. The abdomen was closed, after a drain was inserted into the cecum and brought out lateral to the incision. The post-operative course was uneventful. The patient was discharged on the tenth postoperative day. Postoperatively, 600,000 units of penicillin were administered each day for 1 week; 250 milligrams of penicillin were given orally four times a day for three additional weeks. The patient was followed for a period of one year during which no complications developed. At present he is asymptomatic.

Pathologic Findings

The appendix measured 7 x 3 x 2.5 cm. A sanguineofibrinopurulent exudate coated the serosal surface. A cut section (see Fig. 1) revealed a grossly thickened wall with a markedly reduced lumen. The mucosal surface was focally ulcerated.

A sanguinopurulent exudate was present in the luminal space.

On microscopic examination there was a chronic, active suppurative and granulomatous reaction involving all coats of the wall. Only small islands of mucosa remained; most of the mucosa was absent or necrotic. There were occasional intramural abscesses and large clusters of polymorphonuclear leucocytes. A fibrinopurulent serosal reaction was evident.

Mycotic organisms with radiating rays and peripheral slubs were demonstrated by hematoxylin-eosin, gram and silver methenamine stains (see Fig. 2); organisms were most prominent in the submucosa and were present in intramural abscesses.

Cultural studies were not feasible because the specimen had been submitted in formalin.

Comment

The appendix is the site of origin of most cases of abdominal actinomycosis but the colon and contiguous organs may be involved. In the older literature, cervicofacial actinomycosis far exceeded abdominal actinomycosis in incidence, but recent studies, such as that of Harvey, et. al,¹ recorded 63% of 37 cases were abdominal actinomycosis.

At surgery, gastrointestinal actinomycosis generally presents as an infective granuloma with ulceration of the mucosa and thickening of the appendiceal or bowel wall. Multiple sinuses and fistula tracts may develop and penetrate the abdominal wall.

The clinician is usually dependent upon microbiologic and tissue studies for definitive diagnosis.

If the possibility of actinomycosis is considered, fresh unfixed tissue should be submitted for mycologic as well as bacterial cultures. It is not generally appreciated that other micro-organisms are almost always associated with actinomycotic lesions and that many investigators regard them as playing an essential or synergistic role in initiating the infection.

The histopathology of actinomycosis is so characteristic that morphologic diagnosis can usually be achieved by routine stains although careful search may be necessary.

Since actinomycosis of the appendix occurs relatively infrequently, several aspects of the management of such a case warrant emphasis: (1) Appendectomy is indicated when the disease is localized to the appendix (2) A right hemicolectomy may be

indicated when the disease process is extensive and includes the ascending colon. Hemicolectomy would be mandatory if the diseased process could not be differentiated from regional ileitis or carcinoma. (3) Drainage of the peritoneal cavity is indicated because of the tendency of fistulous tracts to develop. (4) Antibiotics should be used in the immediate postsurgical period and continued for a period of one month. The antibiotic of choice is Penicillin.

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HYPOSENSITIZATION

There is definite evidence that the use of hyposensitization can reduce the severity of allergic symptoms in the allergic individual. It would be logical to assume that if there is a reduction in the severity or frequency of allergic attacks there would be a reduction in the complications from such allergies. If the ultimate goal of the treatment of the allergic individual is not only to control his allergies but also to prevent the development of the complications of these allergies, the most practical way to accomplish this control would be to use a method of hyposensitization which would reduce the frequency of the attacks and also reduce the need of supplemental medication. The use of alum-precipitated extracts seems to have provided a mechanism whereby this can be accomplished.

The allergic individual suffers from a chronic disease which has its exacerbations and remissions. Any chronic disease not only must incorporate therapy for the acute episodes but also for long-term therapy. It also requires the early diagnosis of the disease, prompt institution of therapy, and the effective use of long-term therapy. The allergic individual requires the early diagnosis of his allergic condition, the institution of suitable therapy for the prompt control of his symptoms, and the effective utilization of a suitable hyposensitization program. Only through the use of these 3 factors can prolonged relief for the allergic individual be obtained. In this study it has been demonstrated that the alum-pyridine-precipitated extracts have proven beneficial in the long-term control of the allergic individual. *Hyposensitization and the Allergic Patient*, Raymond T. Benack, M.D., *M. Ann. Dist. of Columbia* (March) 1966, p. 134.

EFFECT OF PROPHYLACTIC GAMMA GLOBULIN ADMINISTRATION ON INFECTION MORBIDITY IN PREMATURE INFANTS

E. F. Diamond, M.D., H. B. Purugganan, M.D.
and H. J. Choi, M.D./chicago

AT BIRTH, THE SERUM CONCENTRATION of gamma globulin is lower in the premature than in the full-term infants. In addition, the level of gamma globulin falls during the first month to about one-half the birth value in both the premature and full-term infants, but this transient hypogammaglobulinemia is more pronounced in the premature.^{1, 2} It is not known whether this period of relative hypogammaglobulinemia is a period of increased susceptibility to infections in the premature.³

The use of gamma globulin prophylaxis during the first year of life to prevent morbidity from infection has, in general, been unsuccessful.⁴ It has been reported, however, that relatively high doses of gamma globulin given during the first days of life were effective in reducing infections during the first month of life.⁵ The present study was designed to evaluate the effectiveness of gamma globulin in reducing morbidity from infections during the first six weeks of life.

Subjects and Methods: Over a period of three years, 625 premature infants were admitted into the study. Almost all the

prematures were of white parentage. The Pediatricians who took care of the prematures were randomly assigned into two groups. Those prematures under the care of Group A Pediatricians received 1 ml. of 16.5% gamma globulin solution intramuscularly as part of the initial admission orders into the premature unit, and another 1 ml. gamma globulin was given at the time of discharge. Those assigned under Group B did not receive gamma globulin and served as controls.

The conventional methods of infant premature care were maintained in both groups of infants. The period of observation was limited to the first six weeks of life. Questionnaires sent to the respective physicians, provided the follow-up information regarding illnesses prior to or at the time of the sixth week physical examination. The hospital records were also reviewed. Only those illnesses judged clinically as infectious in nature, were considered for analysis. Bacteriological confirmation was available in the majority of the subject patients with infections.

Results: There were 625 premature infants born from January, 1963 to December, 1965 (Table 1). 131 infants died from non-infectious causes. Almost all these deaths occurred under 72 hours of age.

Departments of Pediatrics Loyola Stritch
School of Medicine and Little Company of
Mary Hospital.

TABLE I

PREMATURES BORN FROM JAN. '63-DEC. '65	
Total Number of Prematures	625
Deaths from Non-infectious Causes	131
Subject Material	494
A. Not followed	118
Gamma Globulin Group	73
Control	45
B. With Follow-up (76%)	376
Gamma Globulin Group	241
Control	135

118 infants were lost to the study. Of the remaining 376 prematures (or 76% of the survivors) upon whom follow-up was available for the full six-weeks period, 241 received gamma globulin and 135 were in the control group.

There were 5 deaths due to infections, (Table II) 3 in the gamma globulin group and 2 in the control. Infections occurred after discharge from the nursery in patients #1, 2 & 4 and during their stay in the premature nursery in #3 & 5. Patient #3, J. M. developed Purulent Meningitis due to paracolon bacilli on the 18th day, with secondary obstructive hydrocephalus. He underwent several shunting procedures but finally succumbed at 8 months of age.

The incidence of infections did not differ significantly between two groups, (Table III) 10.5% in the gamma globulin group against 11.3% in the control. The type and

TABLE III

INCIDENCE OF NON-FATAL INFECTIONS		
Gamma Globulin/n=238		
Control/n=133		
Conjunctivitis	16	8
Oral Moniliasis	1	3
Skin Pustules	1	1
Gastroenteritis	2	1
URI	1	—
Bronchitis	1	—
Pneumonia	3	2
Total=25(10.5%)		15(11.3%)

TABLE II

DEATHS DUE TO INFECTIOUS CAUSES				
Pts.	Grp.	B. W. (gms.)	Age at Death	Postmortem
P.D.	GG	2,126	43 days	Bronchopneumonia
W.D.	GG	2,183	24 days	Sepsis—E. Coli Meningitis
J.M.	GG	2,098	18 days	+Meningitis— Para colon; Hydrocephalus
T.R.	C	1,673	23 days	Gastroenteritis Bronchopneumonia
D.F.	C	2,325	9 days	Infected Meningo- cele A. Aerogenes

severity of infections were similar in both groups. The infective agents included the more common gram-negative and gram-positive bacteria and were also similar in both groups.

The number of infections did not differ between the two groups of comparable birth weights and between weight groups. (Table IV)

The data in this study showed no significant difference in infection-related morbidity and mortality between the control infants and those receiving gamma globulin.

Observations in certain children with congenital hypogammaglobulinemic states, have shown that such patients are relatively free of infections if their serum gamma globulin level is artificially maintained above 150-200 mg.%.⁶ In prematures, such

TABLE IV

BIRTH WEIGHT DISTRIBUTION				
Birth Weight	Gamma Globulin		Control	
2500-2001 gms.	n=121	I=11	n=71	I=7
2000-1501 gms.	n= 91	I=12	n=45	I=5
1500-1001 gms.	n= 21	I= 2	n=14	I=2
1000-500 gms.	n= 5	I= 0	n= 3	I=1
	238	25	133	15
n = number in each group				
I = Infections				

a low level is only occasionally noted. This would seem to indicate that for the great majority of prematures, their gamma globulin levels appear to be adequate.

Routine gamma globulin prophylaxis involves discomfort for the infant and incon-

venience as well as possible risks.³ It is concluded from this study that the lack of protection from infection during the first six weeks of life does not warrant such a program of routine prophylaxis.

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COYE C. MASON, M.D.
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Corcoran, A. C.: The choice of drugs in the treatment of hypertension. In: *Drugs of Choice 1966-67*, W. Modell, Ed., St. Louis, C. V. Mosby Company, 1966, p. 417.

Indications: DIUTENSEN-R may be employed in all grades of essential hypertension. **Dosages:** Usual dose is 1 tablet twice daily at morning and evening meals. However, adjustment of dosage to suit individual circumstances may be required. Please refer to package insert for full particulars. **Side effects and precautions:** The side effects observed with patients on DIUTENSEN-R have been of a mild and nonlimiting nature. These include occasional urinary frequency, nocturia, nasal congestion, muscle cramps, skin rash, joint pains due to gout symptoms and nausea and dizziness which have been reported for the individual components. Most of these symptoms disappear while the drug is continued at the same or lower dosage level. The concomitant use of digitalis and DIUTENSEN-R may increase the possibility of digitalis-like intoxication. If there is evidence of myocardial irritability (extrasystoles, bigeminy or AV block), dosage of DIUTENSEN-R should be reduced or discontinued. Nocturia in patients with marginal cardiac status and salt and fluid retention can be effectively controlled by limiting the time of administration to early afternoon. DIUTENSEN-R should not be used in patients with a known intolerance to reserpine. Package inserts furnish a complete summary of recommended cautions related to each of the ingredients of DIUTENSEN-R.

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ORAL CONTRACEPTION

ORAL CONTRACEPTIVES were first marketed in 1957 by G. D. Searle & Company after many years of study. At the present time, 70 different trade name products are sold in over 66 countries. There are 33 dosage variations of the 16 basic compounds. Approximately five million American women use these pills on any given day and within five years there may be 10 million users.

These products are believed to be the most reliable (99 plus per cent) means of voluntarily preventing pregnancy when used properly. They have the ability to inhibit ovulation as well as to render the cervical mucus hostile to sperm and to alter the endometrium to make it unsuitable for implantation. To date, the long-term use of these agents has not interfered with subsequent fertility nor has it resulted in damage to offspring at the recommended dosage.

The usual side effects such as nausea, vomiting, headache, spotting, and breakthrough bleeding occur in a small percentage. These reactions may be reduced with

smaller dosages. Changes in weight and premenstrual tension are so common in women of childbearing age that it is difficult to blame these manifestations on "the pill." Some women develop pigmentation of the nipples, linea nigra of the lower abdomen, the uvulva, and the face (mask of pregnancy). Libido may be increased or decreased. Vaginal moniliasis may flourish among pill takers.

Many other conditions are blamed on the oral contraceptives but the data is not always conclusive. Women from 15 to 44 years of age are candidates for hypertension, headaches, cancer, thromboembolic disease, obesity, and other disorders whether they take birth control pills or not. An Advisory Committee on Obstetrics and Gynecology, composed of 10 men, was selected by the FDA. This group concluded that "the data derived from mortality statistics are not adequate to confirm or refute the role of oral contraceptives in thromboembolic disease." They also were of the opinion that if these drugs were

(Continued on page 686)

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EDITORIALS

(Continued from page 682)

responsible, the incidence was infrequent considering the number of users.

The annual mortality from idiopathic pulmonary embolism in this age group is 12 per million; for cerebral embolism and thrombosis, it is 5 per million. The committee pointed out that there should be 85 deaths from idiopathic thromboembolic disease among the five million users of oral contraceptives but only 13 deaths were disclosed.

The sequential approach was reported recently and is recommended to physicians who do not regard the use of oral contraceptives as being physiological. The Los Angeles group¹ "... found that very small doses of estrogen given prior to anticipated ovulation can consistently inhibit ovulation provided that the medication is given early enough in the cycle and taken with regularity. Recognition of the role of estrogen alone contributed to the development of the so-called sequential method of contraception. This method has already been described in the literature, and in brief, simply involves the administration of estrogen alone during the first portion of

the cycle followed by a combination of estrogen plus progestogens during the latter part of the cycle, with various combinations of days used for each. Presumably, the estrogen provides ovulation-inhibiting properties and is thereby responsible for preventing conception, while the combination estrogen-progestogen at the end of the cycle develops the endometrium to the point where regular withdrawal bleeding occurs. Since this is a relatively recent innovation in oral contraception, we are reporting our experiences with the first preparation of this type that we employed in our clinic—a method involving the use of 0.08 mg mestranol daily for 14 days starting on the fifth day of the cycle followed by 0.08 mg of mestranol with 2 mg of norethindrone for six days."

This method is just as effective and the side reactions are about the same as with norethindrone-mestranol tablets. It is, however, more complicated. With research and additional clinical study in this field, we can expect many other changes.

T. R. Van Dellen, M.D.

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AN OLD STORY

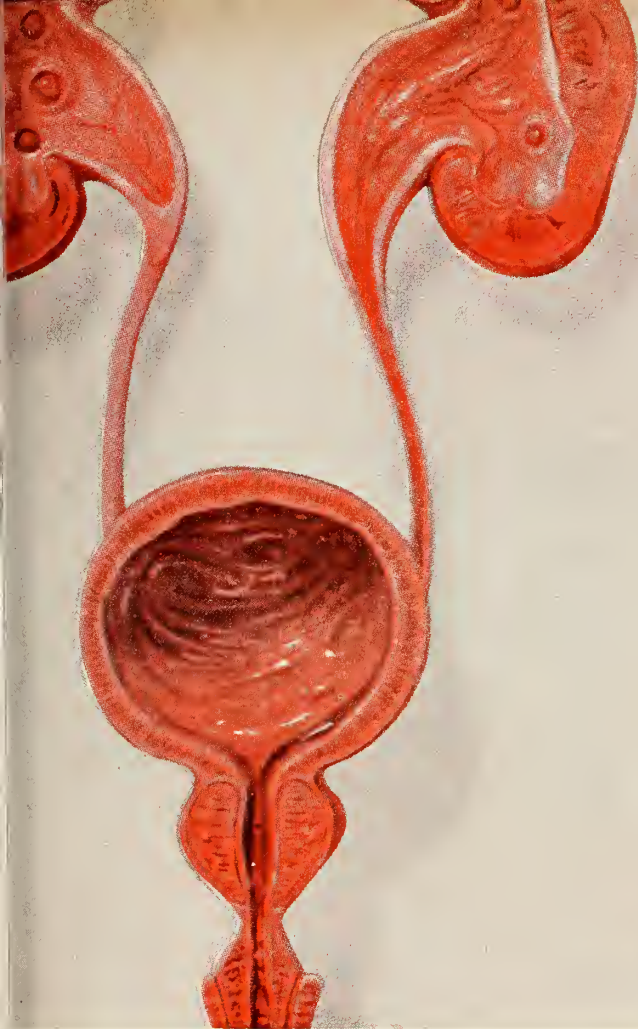
THE HEALTH of the Australian aboriginal was described recently by Cook¹ of Sydney. The native Australian wore no clothing, built no dwelling and practised no agriculture or animal husbandry. They lived in small groups and the duration of the stay in one place was determined by the seasonal availability of water and food. It is estimated that the population varied from 30,000 to 50,000 prior to the white settlement.

Infant mortality was probably high and the only communicable diseases known to have been endemic were trachoma, framboesia and venereal granuloma. Smallpox,

malaria and the dysenteries were introduced by traders. There was no knowledge of the etiology of diseases or of specific therapy. Injuries were better understood. Burns were the most common accident due to the practice of sleeping close to fire. A striking feature was the uncomplicated healing of extensive lacerations and rarity of secondary infection. Early reports suggest that a fair proportion survived to reach the age of 70 years.

According to Cook: "In most tribes, initiation of the male involved circumcision and in many subincision also. The latter

(Continued on page 688)



Diagnosis:

**cystitis?
pyelonephritis?
pyelitis?
urethritis?
prostatitis?**
in any case,
usually gram-negative*

Therapy:

two 500 mg. Caplets® q.i.d.
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Indications: Urinary tract infections caused by gram-negative and some gram-positive organisms.

Effects: Mainly mild, transient gastrointestinal disturbances; in occasional instances, drowsiness, fatigue, pruritus, rash, urticaria, mildophilia, reversible subjective visual disturbances (overbrightness of vision, change in visual color perception, difficulty in focusing, decrease in visual acuity and double vision), and reversible photosensitivity reactions. In cases of overdosage, coupled with certain predisposing factors, has produced convulsions in a few patients.

Contraindications: As with all new drugs, blood and liver function tests are advisable during prolonged treatment. Pending further experience, like most therapeutic agents, this drug should not be given in the first trimester of pregnancy. It must be used cautiously in patients with liver disease or impairment of kidney function. Because photosensitivity reactions have occurred in a small number of cases, patients should be cautioned to avoid unnecessary exposure to direct sunlight while receiving NegGram, and if a reaction occurs, therapy should be discontinued. The dosage recommended for adults and children should not be doubled unless under the careful supervision of a physician. Bacterial resistance may develop.

Tests: Testing the urine for glucose in patients receiving NegGram, Clinistix® or Tes-Tape® should be used since other reagents give a positive reaction.

Dosage: Adults: Four Gm. daily by mouth (2 Caplets® of 500 mg. four times a day) for one to two weeks. Thereafter, if prolonged treatment is indicated, dosage may be reduced to two Gm. daily. Children may be given approximately 25 mg. per pound of body weight per day, administered in divided doses. The dosage recommended above for adults and children should not be doubled unless under the careful supervision of a physician. Until further experience is gained, infants under 1 month of age should not be treated with the drug.

Formulation: Buff-colored, scored Caplets® of 500 mg. for adults, available in bottles of 56 (sufficient for one full week of therapy) and in bottles of 1000. 250 mg. for children, available in bottles of 56 and 1000.

References: (1) Based on 23 clinical papers, 1512 cases. Bibliography on file. (2) Bush, I. M., Orkin, L. A., and Winter, J. W., in Sylvester, J. C.: *Antibacterial Agents and Chemotherapy* - 1964, Ann Arbor, American Society for Microbiology, 1965, p. 722.

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• Low incidence of untoward effects; no fungal overgrowth, crystalluria, ototoxic or nephrotoxic effects have been observed.

• "Excellent" or "good" response reported in more than 2 out of 3 patients with either chronic or acute gram-negative infections.¹

*As many as 9 out of 10 urinary tract infections are now caused by gram-negative organisms: E. coli, Klebsiella, Aerobacter, Proteus, Paracolon or Pseudomonas?... However, infections of the urethra and prostate caused by non-gonococcal gram-negative organisms are believed to be less prevalent.

Parke-Davis

Parke-Davis Laboratories, New York, N. Y. 10016

was sometimes completed in stages, ultimately entailed and artificial hypospadias from meatus to scrotum. The cutting instrument was traditionally a sharp stone or shell. These operations were, of course, performed without anaesthetic, the boy being held by close relatives. Contrary to reasonable assumption, subincision was not practised as a measure of birth control; most tribes appear to have had no idea that conception was associated with sexual intercourse. Pregnancy was believed to result from entry of a spirit into a woman passing a spirit centre. The lighter colour of a mixed-blood child was easily explained—'too much me bin eatum white feller flour.'"

They also had the strange belief that the weak and ailing could acquire the strength of the young and physically strong by

drinking their blood. Voluntary gifts of blood to the old was common. Human perirenal fat was prized for the same reason.

As might be expected, their downfall began with the introduction of European pathogens. The natives acquired none of the British civilization except their vices and diseases. "The self-reliance, resourcefulness, proud independence and fortitude which gave dignity to the native's ancestors are in danger of yielding place to the apathy of the indolent, the servility of the patronized, and the petulance of the unsatisfied parasites."

T. R. Van Dellen, M.D.

REFERENCES

1. Cook, C. E. *Medicine and the Australian Aboriginal*, *Med. J. Australia*, 1:559 (Apr. 2) 1966.

IMJ/Public Health Recommendation

RECOMMENDATIONS FOR PUBLIC HEALTH AND SCHOOL HEARING CONSERVATION PROGRAMS REGARDING HEARING TESTS AND CRITERIA FOR FAILURE AND REFERRAL

THE INTRODUCTION of the ISO Standard for pure-tone audiometers has necessitated changes in the hearing level for screening and the criteria for failure and referral. Beginning with the introduction of this Standard, data have been collected regarding screening tests, threshold tests and medical referrals. To date, these data indicate that procedures and criteria based on the ISO standard are as effective for identifying and referring children with hearing impairment as previous procedures and criteria based on the ASA standard.

Based on this evaluation, the identification and referral of children with a hearing impairment should be made on the basis of two screening tests and a threshold test. The suggested sequence is as follows:

- 1) Administer an individual, sweep-check screening test;
- 2) Administer a second individual sweep test, within two weeks, to those children who fail the first test;
- 3) Administer a threshold test, immediately following the second test, to those children who fail the second screening test;
- 4) Refer those children who fail the threshold test for an otological examination.

Screening Tests and Criteria for Failure—Screen the tones 500, 1000, 2000 and 4000 cycles per second (cps) at a hearing level of 25 dB (ISO). A child should be rescheduled for a second screening and subsequently for a threshold test, if he—
(Continued on page 692)

Does she really care?
Is she alert, encouraged,
positive and optimistic
about getting completely
well soon?

Or has she given in to
the demoralizing impact
of confinement, disability
and dependency?

When functional fatigue
complicates convalescence,
Alertonic can help...

Pleasant-tasting Alertonic is pipradrol hydrochloride—an effective cerebral stimulant whose gentle analeptic action helps counteract the apathy and inertia that can often delay convalescence—together with an excellent vitamin and mineral formula, in a satisfying 15% alcohol vehicle.

Nothing fosters confidence and a sense of well-being better than your own personal warmth, understanding and encouragement together with Alertonic to help insure prompt response.

*Adequate dosage is important: Prescribe Alertonic—
one tablespoonful t.i.d., 30 minutes before
meals...tastes best chilled.*

*And for your patient's sake, prescribe Alertonic
in the convenient, economical one-pint bottle.*

Alertonic[®]

Available Only On Prescription

Each 45 cc. (3 tablespoonfuls) contains: alcohol, 15%; pipradrol hydrochloride, 2 mg.; thiamine hydrochloride (vitamin B₁) (10 MDR*), 10 mg.; riboflavin (vitamin B₂) (4 MDR), 5 mg.; pyridoxine hydrochloride (vitamin B₆), 1 mg.; niacinamide (5 MDR), 50 mg.; choline,† 100 mg.; inositol,† 100 mg.; calcium glycerophosphate, 100 mg. (supplies 2% MDR for calcium and for phosphorus) and 1 mg. each of the following: cobalt (as chloride), manganese (as sulfate), magnesium (as acetate), zinc (as acetate), and molybdenum (as ammonium molybdate).

*Multiple of adult Minimum Daily Requirement supplied.

†The need for these substances in human nutrition has not been established.

Indications: 1. Functional fatigue such as that often associated with: a depressing life experience or stressful time of life; advancing years; convalescence; limited activity or confinement. 2. Poor appetite and vitamin-mineral deficiency as they occur in: patients having faulty eating habits; geriatric patients who are losing interest in food; patients convalescing from debilitating illness or surgery.

Dosage: Adults, 1 tablespoonful; children (over 15 years old), 1 to 2 teaspoonfuls; children (4 to 15 years old), 1 teaspoonful. To be taken three times daily 30 minutes before meals.

Contraindications: As with other drugs with CNS stimulating action, Alertonic is contraindicated in hyperactive, agitated or severely anxious patients and in chorea or obsessive compulsive states.

Side effects: Reports of overstimulation have been rare. Patients who are known to be unduly sensitive to the effects of stimulant drugs should be observed carefully in the initial stages of treatment.

Merrell

THE WM. S. MERRELL COMPANY
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

PUBLIC HEALTH-HEARING TESTS

(Continued from page 688)

- 1) Fails to hear any two tones in the same ear at the 25 dB (ISO) screening level; or
- 2) Fails to hear any one tone at 35 dB (ISO) in either ear.

Threshold Tests and Criteria for Referral—Thresholds should be determined for 250, 500, 1000, 2000, 4000 and 8000 cps. A child should be referred for an otological examination, if—

- 1) His hearing level is 30 dB (ISO) or greater at any two tones in the range 500, 1000, 2000, cps in the same ear;
- 2) His hearing level is 40 dB (ISO) or greater at any one tone in the range of 500, 1000, and 2000 cps in either ear; or
- 3) His hearing level is 40 dB (ISO) or greater at both 4000 and 8000 cps in the same ear.

Some comments are in order with respect to these criteria. The frequency range 500-2000 cps is emphasized because it is critical for the acquisition and use of language and speech. A child with a partial or complete impairment in this range functions under adverse listening conditions. As a result, his academic achievement and his emotional and social adjustment are jeopardized.

Further, a hearing loss at 4000 and 8000 cps very often results from a pathological condition in the cochlea or the auditory nerve, which may be progressive. Because this condition is not visible upon otoscopic examination, parents are sometimes told by the examiner that the medical referral was not necessary, and they become indignant. A great deal of criticism and misunderstanding can be avoided if parents are informed in advance that the referral is precautionary. The examination will reveal, however, whether the condition is

remediable. If it is not, then the audiogram and the examination will establish a base line or point of reference for further assessment of any future progression. Time is a major factor in formulating plans for the child with progressive hearing loss.

It should be noted that thresholds determined in most school facilities are not accurate because of the high levels of ambient noise. Thresholds obtained in these environments should be considered *nominal* only. They may be used to make valid, medical referrals provided the criteria for referral are met but they should not be considered a true indication of the child's best hearing. The latter can only be obtained in isolated and sound treated rooms.

Based on these criteria, our data indicate that about ten to twelve percent of the children tested will fail the first screening test; about fifty percent of those who fail the first screening test, also fail the second, and; about seventy-five percent of those who fail both screening tests will also fail the threshold test. That is, three to five percent of the total number originally screened will be referred for otological examination. In one county where it has been possible to follow the entire testing sequence very closely, the number of over-referrals based on these criteria is about one in every forty-five children referred.

In conclusion, and as a reminder, your attention is directed to an earlier memorandum for the Illinois Department of Public Health and to the "Guidelines for Hearing Screening Programs" from the Children's Bureau of the U.S. Department of Health, Education, and Welfare concerning the ISO Standard. BY 1967, ALL PURE-TONE AUDIOMETERS SHOULD HAVE BEEN RECALIBRATED TO THE ISO LEVELS.



THE DOCTOR'S LIBRARY

PEDIATRIC ELECTROCARDIOGRAPHY: NORMAL AND ABNORMAL PATTERNS INCORPORATING THE VECTOR APPROACH, by Warren G. Guntheroth, M.D., illustrated by the author. W. B. Saunders Company, 150 pages, \$7.00, 1965.

This modestly priced monograph on pediatric electrocardiography is highly recommended for the physician who is involved in daily interpretation of electrocardiograms in children.

Every 12 lead scalar electrocardiogram in the book is accompanied by the vectorcardiogram (Frank system). This enables the reader to develop the skill to construct loops from scalar tracings. The importance of the direction of inscription of the loop in frontal plane is well known and loop construction is practiced routinely. A vector approach to precordial scalar leads is also important especially in combined ventricular hypertrophy patterns to determine ventricular dominance. The author presents a fair number of examples of various ventricular hypertrophy patterns and other anomalies encountered in pediatric cardiology.

The book also contains brief chapters on basic principles of electrocardiography, lead systems, arrhythmias, etc. Tables with normal values for various intervals and deflections of the scalar electrocardiogram are taken from the literature and do not represent an original contribution.

This book undoubtedly has considerable teaching value with emphasis on the morphology of the vectorcardiographic loops. Unfortunately, it does not attempt to clarify the difficult borderline areas between normal and abnormal tracings where quantitation of the vectorcardiogram is more likely the answer.

Alexander J. Muster, M.D.

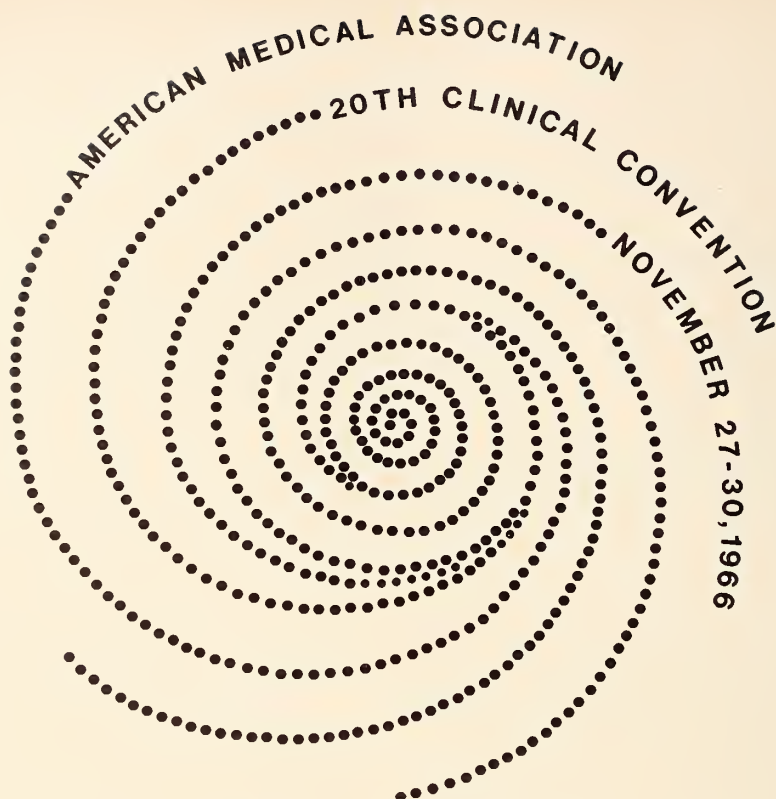
UNDERSTANDING SURGERY. Dr. Robert E. Rothenberg. 717 pages. Trident Press, New York, 1965.

The goal of this book is to allay the fears and anxieties of the patient who is entering the hospital for surgery. The authors feel there is a "dearth of . . . easily understood material about surgery." This 700 page compilation has an index and a discussion from the abdomen to the Zollinger-Ellison syndrome. The material is simply explained and is well illustrated. While such a book may well contribute to a more relaxed attitude in some preoperative patients, certainly in other patients the awareness of mortality and serious morbidity may make the physician's job more difficult. The patient who could read and understand this book is the type who would not be unduly nervous about forthcoming surgery. The patient who is quite anxious about forthcoming surgery should probably be reassured by the physician rather than take the risk of misinterpreting the discussion of surgery as presented in this book.

It is hard to believe that the patient who is armed with the condensed and simplified version of their disease process from this book will enjoy any benefit. Every patient is special and should have an individualized explanation of forthcoming surgery dependent on their emotional stability, capacity for understanding, and degree of mental competence. Certainly, this book can not substitute for a sympathetic explanation of what must be done by the patient's surgeon.

Paul H. O'Brien, M.D.

(Continued on page 707)



AMA '66 LAS VEGAS

Convention site "extraordinaire" that's Las Vegas. America's entertainment capital becomes the classroom for America's practicing physicians—offering you a comprehensive, compact, postgraduate course in recent developments in medical science. A magnificent Convention Center, fine hotels and motels, excellent restaurants plus star studded entertainment await you and your family.

The AMA's first clinical convention in Las Vegas offers a top notch scientific postgraduate program.

Scientific sessions will be held on the following topics: Scintillation Scanning • Radiation and Cancer • Clinical Pulmonary Physiology • Gastroenterology • Futuristic Diagnostic and Therapeutic Tools • Neck Pain • Antibiotics • Urology • Aerospace Medicine • Unconsciousness • Dermatology • Juvenile Diabetes • Endocrine and Metabolic Diseases • Pediatrics • Surgery • Hematology • Psychiatry • Otolaryngology.

Three Postgraduate Courses will be presented: Obstetrics and Gynecology • Fluid and Electrolyte Balance • Cardiovascular Disease. Each Course will consist of three half-day sessions, and there will be a registration fee of \$10.00 for each course, payable with your advance registration.

Four Breakfast Round Table Conferences will be held on the following topics: The Management of Metabolic Bone Disease • Indication for Cardioversion • The Problems and Potential of L.S.D. • An Agonizing Reappraisal of Cancer Chemotherapy • **Closed Circuit Television** • **Medical Motion Picture Programs** • **Over 275 Scientific and Industrial Exhibits.**

NEW PHARMACEUTICAL SPECIALTIES

by Paul deHaen

NEW DOSAGE FORMS

'A & D' CREAM: Emollient and Protective

Manufacturer: White Laboratories o-t-c

Composition:

Vitamin A775 units/Gm.
Vitamin D 53 units/Gm.
Hexachlorophene 1/2%
in a non-reemulsifying type base, lightly
scented.

Indications: Dry skin syndrome, irritated skin,
other minor dermatologic irritations.

Dosage: As required.

Supplied as: 56 Gm. (2 oz.) tubes.

HYCOMINE PEDIATRIC SYRUP: Cough

Preparation R

Manufacturer: Endo Laboratories

Composition: Each 5 cc:

Hydrocodone bitartrate2.5 mg.
Homatropine methylbromide0.75 mg.
Pyrilamine maleate6.25 mg.
Phenylephrine HCl.85.0 mg.
Ammonium chloride30.0 mg.
Sodium citrate42.5 mg.
in fruit-flavored vehiele

Indications: Productive and non-productive
cough, allergic symptoms, bronchial con-
gestion.

Dosage: 6 months to 1 year.....10 drops
1 to 3 years.....1/4 tsp. (20 drops)
3 to 6 years.....1/2 tsp.
6 to 12 years.....1 tsp.
over 12 years2 tsps.

Supplied as: Syrup. Pint and gallon bottles.

MUMPS VACCINE: Biological

R

Manufacturer: Lederle Laboratories

Nonproprietary Name: Mumps vaccine, single
strain, inactivated.

Indications: In persons, particularly adults,
who have been exposed to mumps; also
adults who live in close contact for any
length of time, such as military personnel,
college students, etc.

Dosage: Two injections of 1.0 cc. each, s.c. or
i.m., 1 to 4 weeks apart.

Supplied as: 1 cc. disposable syringes.

THE DOCTOR'S LIBRARY

(continued from page 705)

CONTROVERSY IN INTERNAL MEDICINE.

Edited by Franz J. Ingelfinder, M.D., Arnold
S. Relman, M.D., and Maxwell Finland, M.D.
W. B. Saunders Company, 1966. \$14.50.

According to the editors "the avowed purpose of this book is to air medical controversy" and this they do. It is a compilation of more or less contradictory opinions of 69 contributors and three authors. The subject matter covers a wide range and includes the relationship between atherosclerosis and diet, the anticoagulant dilemma, dietary treatment of duodenal ulcer, malignant potential of colonic polyps, the treatment of emphysema control of obesity, and many other controversial conditions and procedures.

Each chapter is written by at least two contributors. A comment by one of the authors concludes the chapter. The contributor attempts to substantiate his ideas with scientific proof or dares to break with established principles because there is no proof. This makes interesting reading for those who can sit back and enjoy controversy especially when ulcer diets are rediscovered or that doing so does not improve the prognosis or lessen the serious cardiovascular complications of those with the garden variety of hypertension. There are two sides to several medical problems and they are in this book.

T. R. Van Dellen, M.D.

CARDIAC EVALUATION IN NORMAL INFANTS. Robert F. Ziegler. C. V. Mosby, 1965.

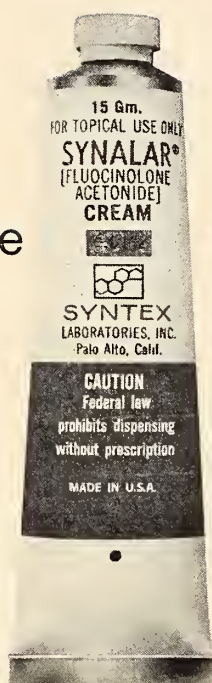
Dr. Ziegler has again stressed in this text the importance of a wider concept of what constitutes normalcy in the infancy period. As he has done previously with neonatal electrocardiography, he emphasizes that only by understanding the normal dynamic physiology of the newborn infant can the physician adequately interpret the information gathered from the physical examination, the roentgenogram and the electrocardiogram.

As might be expected from one so soundly based in electrocardiography, Dr. Ziegler has few kind words for the over-interpretation of the routine chest x-ray. His remarks generally have the growing support of pediatric cardiologists, who feel that the value of the routine film is largely limited to an interpretation of the overall heart size and an estimation of the pulmonary blood flow.

The later chapters of the book are concerned with noncardiac diseases of the newborn which may affect the cardiac examination, and the book concludes with an excellent bibliography of the multitude of disorders discussed.

Roger B. Cole, M.D.

new small size



Synalar® 0.01%
(fluocinolone acetonide) cream

15 Gm.

for even greater
economy in
office or hospital
practice

the superiority topical with the

Now you can prescribe as little or as much Synalar Cream 0.01% as is needed for a particular therapeutic problem in a size that permits the greatest economy for your patient. The new 15 Gm. tube, for example, is best suited for short-term therapy, and for small sites. For more extensive body areas prescribe the 45 Gm. tube—a size that's also ideal for your treatment table. And the 120 Gm. jar is most economical for hospital use. Thus, with Synalar Cream 0.01%, you have the superiority of a modern topical corticosteroid shown to be more effective than 1% hydrocortisone¹⁻³ plus the economy that makes therapy practical for use in more dermatologic conditions, in long-term maintenance, with occlusive dressings in resistant cases, and in extensive area involvement.

Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of its components. **Precautions:** 1. *General*—Synalar Cream 0.01% is virtually nonsensitizing and nonirritating. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to

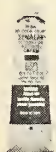
have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. 2. *Occlusive dressing method*—With occlusion of extensive areas, systemic absorption of the corticosteroid may occur, and suitable precautions should be taken. Occasional patients may show contact sensitivity to a particular dressing material or adhesive. Miliaria, folliculitis, or pyoderma have been seen infrequently with the use of this technique. The development of infection requires appropriate antibacterial therapy and discontinuation of the occlusive dressing method. Local atrophy and striae have been reported with protracted occlusive dressing therapy. While lesion relapses can be expected to occur in many psoriatic patients, remissions may persist for several weeks to several months in favorable cases. The patient whose psoriasis is in an active stage, with recent appearance of new lesions, may not be a good candidate and may show early relapse. Some plastic films may be flammable, and due care should be exercised in their use. Similarly, caution should be employed when such films are used on or left near children to avoid the possibility of accidental suffocation. **Side Effects:** Side effects are not ordinarily encountered with topically applied corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions. **References:** 1. Cahn, M. M., and Levy, E. J.: *J New Drugs* 1:262 (Nov.-Dec.) 1961. 2. Meenan, F. O.: *J Irish Med Ass* 52:75 (Mar.) 1963. 3. Robinson, H. M., Jr., Raskin, J., and Dunseath, W. J. R.: *Southern Med J* 56:797 (Jul.) 1963.

of a modern corticosteroid economy of hydrocortisone

Now... a choice of 3
economical sizes



120 Gm. jar



15 Gm. tube



45 Gm. tube

fluocinolone acetonide — an original steroid from

SYNTEX 
LABORATORIES INC., PALO ALTO, CALIF.

LOOKING FOR A PLACE TO PRACTICE?

PLACEMENT SERVICE LISTS OPENINGS

Following is a sample of the more than 150 openings for general practitioners listed with the Illinois State Medical Society's Physicians' Placement Service. Interested physicians who register with the service will be provided with a complete list of openings. Inquiries and comments should be directed to: Mrs. Robert Swanson, Secretary, Physicians' Placement Service, Illinois State Medical Society, 360 North Michigan Avenue, Chicago 60601, SState 2-1654.

BUREAU COUNTY: Princeton; population 6,200. Estimated population of trade area—40,000. Several small towns in trade area without resident physicians. 11 physicians. Perry Memorial Hospital located here—95 beds. 60 miles from Peoria, Illinois. 2 local prescription drug stores. Office building of Warren Creviston, M.D., recently deceased, available if desired. Residential headquarters on second floor. Predominant nationality of residents—Swedish. Principal sources of income: agriculture, industry. 10 churches—Protestant and Catholic. 1 high school; 3 grade schools. 60 miles to Bradley University, Peoria. Recreational facilities include golf, tennis, swimming, hunting, community concert series, etc. Excellent library. County seat of Bureau County. 115 miles from Chicago. On routes 6, 34, 26 and 1.80. For further information concerning this opening contact: W. E. Erkonen, M.D., President, Bureau County Medical Society, 726 S. Main Street, Princeton, Phone 2-8111; Mr. A. C. Walters, Administrator, Perry Community Hospital, Princeton. Phone 2-1665; Mr. C. J. Riley, Frontier Realty Company, Princeton; Mrs. Wilda T. Makutchan, Makutchan Real Estate Agency, Princeton, Illinois.

KANKAKEE COUNTY: St. Anne; population 1700. Several small towns in area without physicians. Two physicians until recently, ages 48 and 50; Dr. age 50 now deceased. Urgent need for replacement. Remaining physician limits practice due to heart condition. Nearest hospitals at Kankakee—2-14 miles. 60 miles from Chicago. One prescription drug store. 10 year old building available; stone and redwood; 5 rooms occupied by dentist. Equipment for rent or for sale. Predominant nationality of citizens: Dutch & French. Agricultural area. Churches: Presbyterian, Catholic, Baptist, and Dutch Reformed. 3 grade schools; 1 high school. For further information concerning opening contact: Mrs. Lesley E. Hayes, Dixie Highway, St. Anne, Ill. Phone: 427-6574.

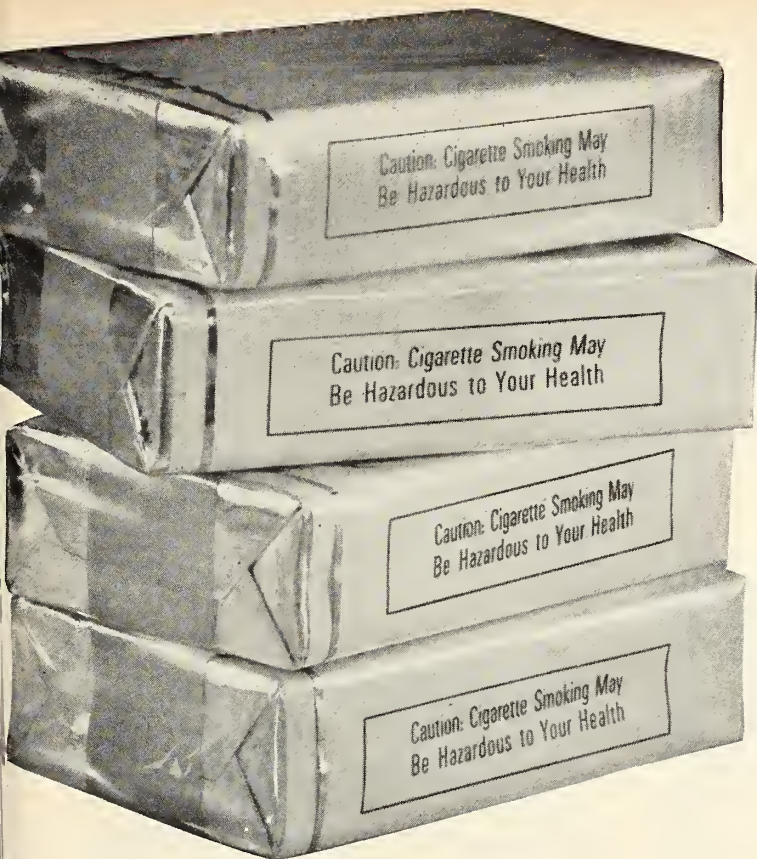
MADISON COUNTY: Granite City—population 60,000. Office of Irvin Wiesman, M.D., deceased (March 9, 1966) available. Adequate facilities for two busy physicians—specialists or G. Ps. Immedi-

ate occupancy through rental or lease. Office fully equipped. 2 consultation rooms; 5 treatment rooms. St. Elizabeth Hospital nearby. 2 local golf courses. For detailed information contact: Mrs. Irvin Wiesman, 1255 Niedringhaus Avenue, Granite City, Illinois, Phone: GL 2-2144—GL 2-3193—TR 6-1869, Area code—618.

TAZEWELL COUNTY: Hopedale. Population: 750. Estimated population of trade area: 15,000. The Hopedale Medical Complex (Hopedale Hospital, Hopedale Nursing Home, Hopedale House for the Elderly and Hopedale Rehabilitation Center). G. P. or internist preferred. To serve as key man in the complex. Independent practice. Support from 11 G. Ps. 1 board surgeon on staff. All specialties available from nearby large cities. Hospital clinical lab, x-ray dept. and complete outpatient pharmacy with full time registered phar. and full time dentist. 3 universities, boating, sailing, country club with large pool less than ½ hr. away. New consolidated school district to have finest high school in downstate Ill. Catholic, Protestant, Mennonite churches. New Dr. could have office in complex or in town. For further information contact: Edward W. Gilgan, Administrator, L. J. Rossi, M.D., Medical Director, Phone 449-3321. Area code 309.

WHITESIDE COUNTY: Prophetstown. Population 1800. Dr. John Gerhardt moved September 1966 to take a residency. Replacement needed. Office may be rented for \$150 monthly, heat included, or owner would sell or lease. One additional physician in community. Morrison Community Hospital, 35 beds, Sterling Community Hospital, 138 beds. 11 and 14 miles from Prophetstown. Sources of income: industry (3 factories) and agriculture. Churches: Catholic, Lutheran, Presbyterian, Methodist, Church of Christ, and Christian Advent. Grade and high schools. Local country club with golf course and club house. 12 miles from Sterling, Rock Falls and Clinton, Iowa. Located on Rock River. For further information contact: John J. Gerhardt, M.D., 220 Washington Street, Prophetstown, Illinois.

WHITESIDE COUNTY: Tampico; population 800; estimated population of trade area, 5,000. Previous physician had been here 30 yrs. Equipped office available if desired. Nearest hospital at Sterling, 15 miles. Nearest physician, 12 miles. Grade and high schools. Protestant and Catholic churches. 3 country clubs within 15 miles; good boating, fishing, hunting and saddle clubs within 15 miles. Active Lions Club, Masonic Lodge, Eastern Star, Civic League, PTA, etc. For further information contact: Earl R. Krantz, Box 13, Tampico, phone 438-2533 or Tampico Barber Shop, Box 246, Tampico, Illinois. Phone 438-2715.



the tar trapped in
Tar Gard* in one year ...



exceeds the weight
of four packs of cigarettes

Use this statistic to help convince your patients to stop smoking.

presentation of a familiar point of reference giving some indication of the amount of tar in cigarette smoke could help influence your cigarette smoking patients to quit.

Tar Gard help. In an independent study by Curtis and Hopkins, Analytical Chemists, San Francisco, it was estimated that over a 365 day period, using twenty filter cigarettes a day as a base, the average amount of tar trapped in the unique* Tar Gard filter holder was 0.29 g, more than the weight of four packs of cigarettes.** Use this statistic to give your patients a more concrete grasp of the amount of tar in cigarette smoke.

Support with visual demonstration. Combine reference to this statistic with a visual demonstration in your office. Show tar actually being isolated from cigarette smoke.

All you have to do is have a patient smoke four cigarettes through the Tar Gard Demonstration Unit. When he sees the amount of tar trapped in the transparent mouthpiece chamber and realizes that normally this would stay in the mainstream of the smoke — the smoke he inhales — this, related to the number of cigarettes he has smoked over a 365 day period could prove to be the most dramatic visual proof of the health hazards of smoking you could show him... enough to force him to draw his own conclusions as to whether the smoking habit is worth the price he might have to pay... enough to convince him to quit.

Complete and mail coupon for your free Tar Gard Demonstration Unit.

*Technically, Tar Gard is not a filter. It is a patented tar trapping device based on the principle of the Venturi tube, such as is employed in the bedside respirator used in critical respiratory management, the vaporizer and the aspirator. In Tar Gard, as cigarette smoke is drawn into the mouthpiece, the pressure energy of the tar-filled smoke is accelerated (to approximately 200 mph) and then stopped abruptly by an impingement barrier, where tars are trapped.

**36 sealed packs of a leading filter cigarette were weighed and divided by 9 to give an average four pack weight of .23 lb.

Tar Gard Company, 2 Pine Street, San Francisco, Calif. 94111

- ☐ Please send me free professional Tar Gard demonstration unit.
- ☐ Please send me _____ doz. regular Tar Gard retail units at special professional price of \$10.00 per 1/2 doz., minimum order. (\$1.67 each — usually retails at \$2.95)
- ☐ Check enclosed. ☐ Please bill me.

Name _____

Type of Practice _____

Address _____

City _____ State _____ Zip _____

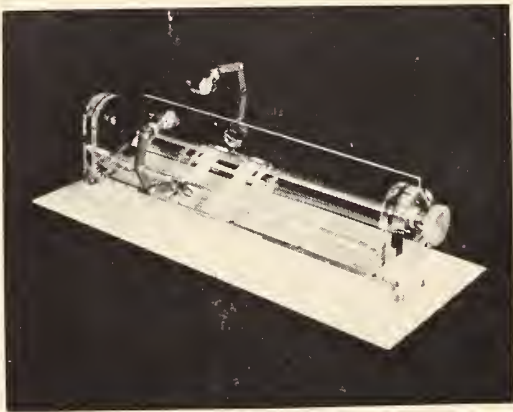
TAR GARD



Rx Reviews

and New Products

Tiltable Infant Bed Specially Designed For Intensive Newborn Care



An infant bed, specifically designed to provide controlled positioning of newborns during intensive care, is now available from Bourns, Inc., Life Systems.

The new Model LS-105 Infant Bed can be tilted from side to side to help prevent tissue damage from prolonged pressures. It also greatly facilitates obtaining of blood samples and suctioning.

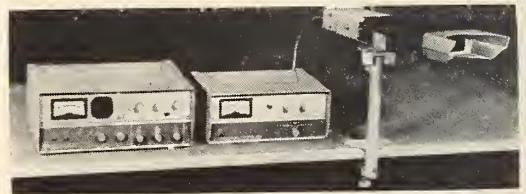
A removable panel in the bottom of the bed permits chest X-rays to be taken without disturbing the infant. The bed can be placed in any standard incubator and its sides can be adjusted easily to accommodate different size infants.

Two hose adapters for connecting respirator hoses to an infant are mounted on articulated arms allowing complete freedom of movement. These adjustable arms permit relief of any stress between a nasal mask or nasotracheal tube and the infant while allowing bed rotation.

For additional information about the

Bourns Model LS-105 Infant Bed, write Bourns, Inc., Life Systems, 300 Airport Road, Ames, Iowa.

Measuring Drug Reaction Time



A new advanced concept, the FP-104 Flicker Fusion Threshold Tester (CFF) for research of various pathologic and psychopathologic conditions, as the relationship of (CFF) to drug reaction time, especially tranquilizers. The unit is self-contained requiring no peripheral test equipment. Direct frequency read-out 10-89.9, continuously adjustable light to dark ratio. Contains timer for presentation of stimuli. Light source is Sylvania glow modulator tubes. Choice of four (4) types of optical display systems including force choice optical unit. For full information write: Medec, Division of Fluid Dynamics, Box 10, Morristown, New Jersey.

Remove Stitches, Throw Suture Kit Away

Who ever heard of a sterile suture removal kit so inexpensive it can be thrown away—scissors and all—after using? The kits are now available from Professional Disposable Products, Inc. of Mount Vernon, N. Y., at a quantity price of 27 cents each. The disposable kits fit easily into the

(continued on page 715)

R REVIEWS

(continued from page 712)

doctor's traveling bag or can be used in his office.

A specially designed Peel-Pak closure opens quickly, exposing metal suture scissors, plastic forceps, and a gauze square—all sterile and ready for immediate use. They are excellent for cutting and removing sutures of silk or gut, and are particularly recommended for removing nylon sutures. The forceps hold 5-0 nylon firmly.

All components, including the scissors and forceps, are intended to be disposable, thereby eliminating the costly expense of instrument upkeep, loss, and the danger of cross-infection. Ten kits cost \$3.90 but 200 can be purchased for \$54 reducing the unit price to 27 cents.

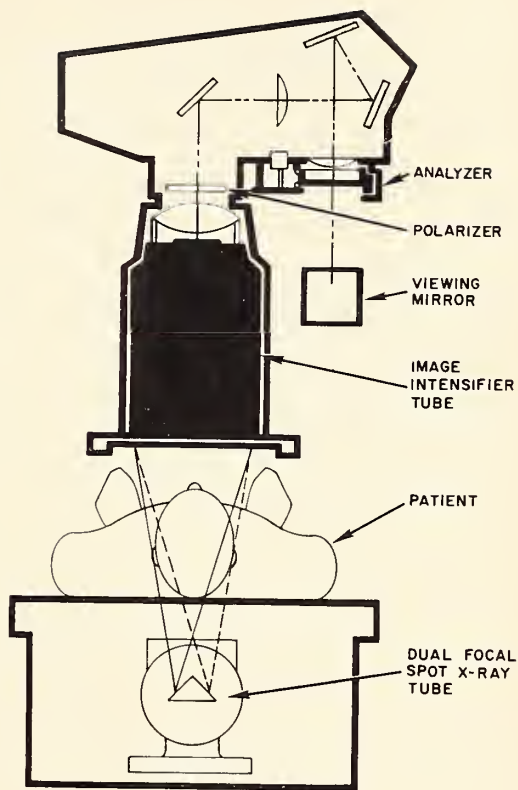
For additional information, inquiries should be addressed to Professional Disposable Products, Inc., 22-28 South Sixth Avenue, Mount Vernon, N. Y. 10550.

Breakthrough in X-Ray Fluoroscopy

A breakthrough in x-ray fluoroscopy technology is now enabling physicians to see the inside of the human heart and other organs in three dimensions without using special binoculars or wearing stereo glasses.

The development, by General Electric's X-Ray Department, permits a specialist to perform heart catheterization in up to one-half the time and with reduced risk and discomfort to the patient. It also can be used to substantially speed up such surgical procedures as pinning of bones, pinpointing the exact location of foreign objects, and examination of the gastro-intestinal tract.

The low-cost fluoroscopy system developed by G. E., and known as a Stereo Fluoricon, provides images of the interior of organs in their natural three-dimensional relationships which can be directly viewed in a lighted room. It is the first commercially available stereo fluoroscopy system.



OPERATION OF THE STEREO FLUORICON system perfected by General Electric's X-Ray Department is illustrated in the above diagram. The stereo system uses an x-ray tube similar to that used in stereo radiography with two cathodes approximately two inches apart. Electrical pulses to the tube cause each cathode to fire sequentially, so one x-ray beam passes through the patient every 1/60 second. Because the two beams are slightly separated, each produces an image of the body structure from a slightly different angle, just as eyes do. A stationary optical polarizer is located just above the objective lens of the image intensifier tube, and a second rotating polarizing filter (referred to as the analyzer), synchronized to the firing of the x-ray beam, is placed before the viewing mirror.

These two polarizers separate the alternating right and left images to the left eye and to the right eye of the viewer. At 60 pulses per second, flicker is imperceptible and the viewer sees one continuous 3-D image of the x-rayed area.

Automatic Photomicrography

The new Reichert Photo Automatic is a fully automatic photomicrographic (continued on page 716)

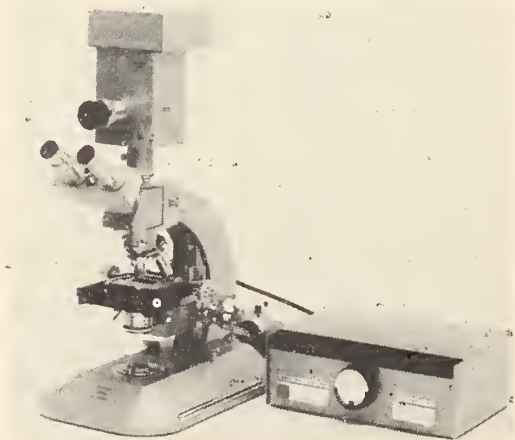
R REVIEWS

(continued from page 715)

camera for use with any microscope. It indicates the exposure time *before* actual exposure which gives the operator an opportunity to decide whether the measured exposure time represents a reasonable exposure.

A beam splitter directs 80% of the light to the camera and 20% to the focusing telescope. The frame size is 24 x 36 mm with readily interchangeable cassettes. A vibration free magnetic shutter provides for exposures starting at 1/125 second with a range to any exposure time necessitated by film and specimen. The film speed setting can be varied between ASA 6 and 1600. The magnification of the built-in photographic eyepiece is variable from 6.3x to 10x eliminating the need for changing objectives. The apparatus permits integrated and point measurements. For full information write to: William J. Hacker & Co., Inc., P.O. Box 646, West Caldwell, New Jersey 07006.

Direct Scanning in the Analytical Ultracentrifuge



A major instrumentation development in analytical ultracentrifugation is described in a new brochure from Beckman Instruments, Inc.

Featured is the Photoelectric Scanner,

which operates in conjunction with the absorption optical system of the Model E Analytical Ultracentrifuge to permit direct scanning of cell contents as they are being centrifuged at speeds to 68,000 rpm.

Included are representative traces of integral (optical density versus distance) and derivative curves which are recorded simultaneously. The brochure also references technical literature reporting on scanner development and work done with direct scanning to date.

Copies of the brochure, SB-264, may be obtained from Spinco Division of Beckman Instruments, Inc., 1117 California Avenue, Palo Alto, Calif., 94304.

Special Bedding and Staff Apparel for Contamination, Burn and Isolation Care

A new "CBI" program of special Bedding and Staff Apparel, designed especially for Contamination, Burn and Isolation care of hospitalized patients, includes single-use sheets and pillow cases, and "head-to-toe" apparel of gowns, caps, masks and shoe covers for the Hospital Staff. Each item is available as pack components in special Bedding Sets or Staff Packs under the Shield label of Convertors Incorporated, the manufacturer of Surg-O-Pak®, disposable surgical and OB drape packs. With this "CBI" program of sterile, ready-to-use, disposable bedding and staff apparel, seriously ill patients with diminished resistance and increased susceptibility can now be further protected against the ever-present danger of cross-infection.

Each "CBI" bedding and apparel item has been designed and fabricated as a functionally-superior single-use disposable for replacement of a traditional reusable item.

Shield Bedding Sets and Shield Staff Packs are available from Convertors through its Technical Service Representatives or its supply distributors. For further information: Donald R. L. Franklin, President, (201) MARKET 4-0300.

"'Tranquilizer' is not a good word"¹

THIS classification is psychologically too seductive, pharmacologically too unspecific, and in terms of results not infrequently untrue.^{1,2}

What is a tranquilizer? According to the 24th Edition of Dorland's Medical Dictionary³ a tranquilizer is "an agent which acts on the emotional state, quieting or calming the patient without affecting clarity of consciousness."

Defining a drug by its effects, however, can be misleading. The same effects by which the dictionary defines a tranquilizer have sometimes been seen after administration of a sedative — or, for that matter, a placebo.

Ambiguous though the term may be, it appears to be here to stay. The 1966 edition of the Physicians' Desk Reference⁴ lists 42 tranquilizers indicated for treatment of anxiety and apprehensive states.

'Tranquilizers' have differences in action, differences in effect

Although all tranquilizers are intended to calm anxious patients there are differences in their actions — and in their effects. They have been divided into three categories — the rauwolfia group, the 'minor' tranquilizers, and the phenothiazines.⁵

Although the tranquilizing effect of rauwolfia has been known for centuries, its use as an antipsychotic agent in current practice has diminished.⁵

A 'minor' tranquilizer is often prescribed to achieve more than one effect. Thus, besides being tranquilizers some of these compounds may be muscle relaxants, antihistaminics with some calming action, anticholinergic sedatives, or antispasmodics.⁵

The phenothiazines are considered 'major' tranquilizers because they alter psychotic behavior.¹ This classification may have done them more harm than good because it implies that the phenothiazines should be reserved for the more severely disturbed. This is not necessarily true.

The phenothiazines — and the problem of sedation

One of the problems of prescribing phenothiazines for ambulatory patients has been the fear that excessive sedation will impair the patient's ability to function. This, however, is less of a problem with some of the phenothiazines.

"Clinically they may be differentiated primarily in terms of their potency and the extent of their sedative effect, which appear to be inversely proportional. That is, the least potent, the one which is used in highest dosage, chlorpromazine, is the most sedative, while the reverse holds true for fluphenazine."⁶

In a recent report on various studies conducted over several years evaluating 360 patients treated for anxiety and stress with seven phenothiazines, this inverse relationship of potency to sedation was confirmed.⁷ Also under consideration was the degree to which the particular phenothiazines neutralized anxiety (the angolytic index). Interestingly enough there was, again, an inverse relationship. The most sedative of the phenothiazines appeared to be the least active in

neutralizing anxiety. Fluphenazine, one of the least sedative, on the other hand, was found to be most effective in relieving anxiety.⁷

RELATIVE SEDATIVE AND ANGOLYTIC INDICES OF PRINCIPAL PHENOTHIAZINES*

DRUG	SEDATIVE INDEX	ANGOLYTIC INDEX	BASED ON STANDARD DOSE OF
Chlorpromazine	100	15	25 mgs.
Trifluoperazine	100	15	25 mgs.
Thioridazine	90	17	25 mgs.
Perphenazine	15	25	4 mgs.
Carphenazine	25	25	25 mgs.
Trifluoperazine	3.3	95	2.0 mgs.
Fluphenazine	3.5	100	2.5 mgs.

*adapted from Sainz⁷

Prolixin is therapeutically effective without excessive sedation

When used as a 'tranquilizer' in general medical practice, in many patients Prolixin (Squibb Fluphenazine Hydrochloride) suppresses anxiety, but not normal activity. These two features are of particular importance to patients who must be able to live and work without their normal daily activities being restricted.

Because of its longer duration of action, Prolixin, in doses of as little as one to three milligrams in adults, generally taken once a day, is effective in maintaining many patients free of their symptoms of anxiety and tension.

Contraindications: Do not use with high doses of hypnotics or in patients with subcortical brain damage. Use with caution in patients with a history of convulsive disorders. Severe reactions may occur in patients with idiosyncrasy to other centrally-acting drugs, and severe hypotension may occur in patients with special medical disorders, e.g. mitral insufficiency and pheochromocytoma.

Precautions: Effects of atropine, anesthetics and C.N.S. depressants may be potentiated. Hypotension may occur in patients undergoing surgery. Do not use epinephrine for treatment of the hypotensive reactions which may appear in patients on phenothiazine therapy.

Side Effects: Extrapyramidal reactions, allergic skin reactions, the possibility of anaphylaxis, drowsiness, visual blurring, dizziness, insomnia, nausea, anorexia, salivation, edema, perspiration, dry

mouth, abnormal lactation, polyuria, hypotension, and jaundice and biliary stasis may occur. Routine blood counts are recommended to determine possible blood dyscrasias; if symptoms of upper respiratory infection occur, discontinue drug and institute appropriate therapy.

Available: 1 mg. tablets. Bottles of 50 and 500.

For full prescribing information, see package insert.

References: 1. Simpson, G.M.: Postgrad. Med. 39:557, 1966. 2. Freyhan, F.A.: Am. J. Psychiat. 115:577, 1959. 3. Dorland's Illustrated Medical Dictionary, ed. 24, Philadelphia, W. B. Saunders Co., 1965, p. 1603. 4. Physicians' Desk Reference, 1966, Oradell, N.J., 1965, p. 310. 5. Cohen, S.: Northwest Med. 65:197, 1966. 6. Detre, T., and Jarecki, H.: Connecticut Med. 25:553, 1961. 7. Sainz, A.: Psychosomatics 5:167, 1964.

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NEWS and ANNOUNCEMENTS



Appointments

J. Herbert Maltz, M.D., has been appointed Medical Director of Ridgeway Hospital.

Dr. Maltz has been superintendent of Chicago State Hospital for the past seven years. He is certified in psychiatry by the American Board of Psychiatry and Neurology. He is a member of the Illinois Psychiatric Society, having served as Chairman of several committees, and a fellow of the APA.

Nobel Winners

Drs. F. Peyton Rous, Rockefeller University, and Charles Huggins, University of Chicago, are the 1966 Nobel prize winners in medicine. Dr. Rous was cited for his discovery of tumor-inducing viruses. Dr. Huggins was recognized for pioneer research leading to hormonal treatment of prostatic cancer. The two professors share a monetary award of \$60,000.

Two members of the University of Illinois College of Medicine staff in Chicago have received key posts on national professional organizations.

Dr. Irving Schulman, professor and head of the Department of Pediatrics, has been elected president of the Society for Pediatric Research. Membership in the Society, which is the national academic research organization of the profession, is based on research contributions made by those in it.

Dr. Harold A. Kaminetzky, professor of obstetrics and gynecology, has been elected secretary of the American College of Obstetricians and Gynecologists. This body, composed of over 10,000 men and women throughout the U.S. and Canada, is the largest of its type in the Western Hemisphere.

Dr. Harry J. Lowe, an authority in the use of hyperbaric oxygen therapy, has been named Professor of Anesthesiology in the Department of Surgery at The University of Chicago.

The appointment was announced by Edward H. Levi, Provost of the University.

Since 1964, Dr. Lowe has been Associate Research Professor of Anesthesiology at the State University of New York at Buffalo and Director of the Hyperbaric Oxygen Therapy Unit at the Millard Fillmore Hospital, Buffalo. Hyperbaric Oxygen Therapy is the use of oxygen under high pressure to aid in the treatment of gas gangrene and other diseases.

Speaking of the new appointment, Dr. Rene Menguy, Professor and Chairman of the Department of Surgery, said:

"Dr. Lowe's appointment to our Department continues the very active development of anesthesiology at the University under the direction of Dr. Duncan A. Holaday."

Dr. Holaday, Professor and Chief of the Section of Anesthesiology in the Department of Surgery, said of the appointment:

"Dr. Lowe is a very able clinical anesthesiologist as well as a first-class medical scientist, whose work is based on a thorough command of mathematics, physics, and chemistry. His more recent research interests have been in the developments of more precise methods of anesthesia, in the study of the uptake and distribution of anesthetic drugs, and in the use of hyperbaric oxygen therapy."

A native of Nogales, Arizona, Dr. Lowe attended the University of Arizona, where he earned the B.S. degree in chemistry in 1943 and the M.S. in chemistry in 1945.

(continued on page 720)



*"Wine is constant proof
that God loves us and
loves to see us happy"*

—BENJAMIN FRANKLIN



DEAR DOCTOR:

Ben was right, Doctor, as usual. The warm California sunshine that blesses our vineyards becomes, for you, a glass of happiness and good fellowship. Try a bit of wine with your dinner tonight.

Especially if you go home tired and tense. Because as a physician you know, Doctor, how wine can help relieve tension; is euphoric for the elderly patient and serves as a source of energy; goes well with many prescribed diets in diabetes and cardiovascular disease.

Speaking of patients, we'd like to send you, free, the 64-page booklet, "USES OF WINE IN MEDICAL PRACTICE," newly revised. It summarizes the findings of a quarter century of scientific research on this subject in America and Europe. We believe you will find it useful in your practice.

We'd also like to send you (to make your wife's menu planning easier, and your meals more delicious), our free 24-page booklet, "WINE COOKERY—THE EASY WAY."

Just drop us a note for these two free booklets. And here's a California toast to your own health, Doctor, with wine...
"¡Salud!"

The Winemakers of California

WINE ADVISORY BOARD, 717 MARKET ST., DEPT. 3, SAN FRANCISCO, CALIF. 94103

NEWS AND ANNOUNCEMENTS

(continued from page 718)

From 1945 until 1952, he was at the Johns Hopkins University School of Medicine, where he earned the M.D. degree in 1949 and subsequently did research in enzymology. In 1952, he went to the University of Texas Medical Branch as an Assistant Professor of Biochemistry, and in 1953 he became an Associate Professor there.

From 1955 until 1958, Dr. Lowe was on the staff of the U.S. Army Medical Center at Edgewood Center at Edgewood, Maryland, and the William Beaumont Army Hospital, El Paso, Texas. In 1958, he joined the staff of the Roswell Park Memorial Institute in Buffalo, New York. In 1963, he completed a residency in anesthesiology at Millard Fillmore Hospital, Buffalo, and, in 1964, he joined the staff of the Millard Fillmore Hospital and the faculty of the State University of New York at Buffalo.

Dr. Lowe is a member of the American Chemical Society, the American Medical Association, the American Association for the Advancement of Science, and the honorary societies, Phi Beta Kappa, Phi Lambda Upsilon, and Sigma Xi. He is the author of more than 25 research reports, many of them concerning the techniques of anesthesiology.

Receives Highest Award of Animal Care Panel

The highest award of the Animal Care Panel, an association of more than 1,900 persons and institutions professionally concerned with the production, care and study of laboratory animals, was presented recently to Dr. Bennett J. Cohen.

Dr. Cohen, Associate Professor of Physiology at the University of Michigan, received a bronze plaque and a \$500 honorarium for his "outstanding accomplishments in the improvement of the care and

quality of animals used in biologic and medical research."

The award is named in honor of the late Dr. Charles A. Griffin (D.V.M.), of the Division of Laboratories and Research, New York Department of Health.

Dr. Cohen holds both an M.S. and Ph.D. in Physiology from Northwestern University Medical School and a D.V.M. from New York State Veterinary College, Cornell University.

A past consultant in General Medical Research at the Los Angeles Veterans Administration Center, Dr. Cohen was on the faculty at U.C.L.A. from 1954 to 1962. He served as director of Northwestern University Medical School's Department of Animal Care from 1949 to 1953 and from 1953 to 1957 was statewide veterinarian and lecturer for the School of Public Health of the University of California at Berkeley.

Dr. Cohen, author of more than 50 major articles on animal care and research, is a member of the National Institute of Health's National Advisory Committee on Animal Resources. He is chairman of the Committee on Use and Care of Animals of the American Physiological Society and chairman of the Council on Accreditation of the American Association for Accreditation of Laboratory Animal Care. A member of the Committee on Animal Care of the Association of American Medical Colleges for three years, he is also a past-president of the American College of Laboratory Animal Medicine and is currently associate editor of *Laboratory Animal Care*, the official Animal Care Panel publication.

Dr. Cohen is a member of the National Council of the National Society for Medical Research, a past-president of the Animal Care Panel, and a member of the advisory council of the Institute of Laboratory Animal Resources.

(continued on page 722)

If you can't alarm her into wearing elastic stockings...

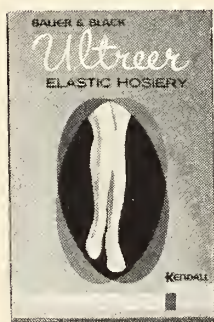
charm her with **Ultreer**™

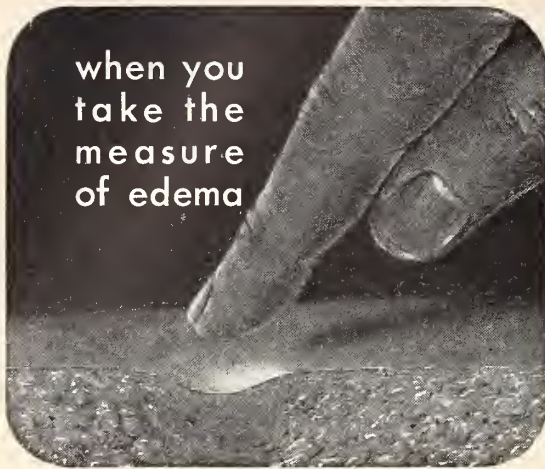
You see, a woman simply has no defense against Ultreer Elastic Stockings. They look like lovely support stockings. They feel like lovely support stockings.

They're that sheer, and shapely and comfortable.

But that's where the similarities end. New Ultreer fits firmly and evenly over the entire leg. Gives true therapeutic compression necessary to relieve varicose veins and other leg disorders. Each pair provides the therapy you prescribe. And at such a low price, a woman can afford two pairs of Ultreer as easily as she can afford one pair of ordinary elastic hosiery.

Ultreer. What a stocking.





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measure
of edema

... introduce your patient to


(BENZTHIAZIDE)

AQUATAG (Benzthiazide) is a potent, orally active, nonmercurial, diuretic agent. It is effective orally in producing diuresis in edema states, where it is therapeutically comparable to mercurials given parenterally. AQUATAG (Benzthiazide) is mildly antihypertensive in its own right and enhances the action of other antihypertensive drugs when used in combination.

DIURETIC ACTION: Clinically, the oral administration of AQUATAG (benzthiazide) results in diuretic activity within two hours with maximal natriuretic, chloruretic, and diuretic effects occurring during the fourth, fifth and sixth hours. Maintenance of response continues for approximately 12 to 18 hours. Acidosis is an unlikely complication since therapeutic doses of AQUATAG (benzthiazide) do not appreciably increase bicarbonate excretion. Edematous patients receiving 50 mg. of AQUATAG (benzthiazide) daily for five days developed a maximal increase in the rate of sodium excretion on the first day, and maintained this high rate until depletion of excessive body stores of sodium.

In congestive heart-failure patients, AQUATAG (benzthiazide) produced the same weight loss, during a 48-hour treatment period as did a maximally effective dose of hydrochlorothiazide.

DOSAGE: Diuresis, initially 50 to 200 mg.; maintenance 25 to 150 mg., daily. Hypertension 50 to 100 mg. initially, adjusted to 50 mg. t.i.d. or downward to minimal effective dosage level.

WARNINGS: Use with caution in the presence of renal disease as azotemia may be precipitated or increased. In patients with advanced hepatic disease, electrolyte imbalance may result in hepatic coma. Dosage of coadministered antihypertensive agents should be reduced by at least 50%. In cases of suspected electrolyte imbalance, serum electrolyte determinations should be performed and imbalance, if any, corrected. Stenosis or ulcer of small intestine have been reported with coated potassium formulas, and surgery has been required and deaths have occurred. Based on surveys of both United States and foreign physicians, incidence of these lesions is low and a causal relationship in man has not been definitely established. Until further experience has been obtained, the use of the drug in pregnant patients should be weighed against possible hazards to the fetus.

CONTRAINDICATIONS: AQUATAG (benzthiazide) is contraindicated in progressive renal disease or dysfunction including increasing oliguria and azotemia. Continued administration of this drug is contraindicated in patients who show no response to its diuretic or antihypertensive properties. Severe hepatic disease is a relative contraindication (See "Warnings" above).

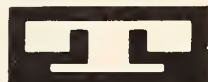
PRECAUTIONS AND SIDE EFFECTS: Electrolyte imbalance with hypokalemia (digitalis toxicity may be precipitated), hypochloremic alkalosis and hyponatremia may occur. Patients with cirrhosis should be observed for impending hepatic coma and hypokalemia. Other reactions may include blood dyscrasias, hyperuricemia and gout, nausea, jaundice, anorexia, vomiting, diarrhea, dizziness, paresthesia, photosensitivity and headache.

Hepatic fever, tremor, confusion and drowsiness are signs of impending pre coma and coma in patients with cirrhosis. Insulin requirements may be altered in diabetes. AQUATAG (benzthiazide) should be used with caution post-operatively as hypokalemia is not uncommon. Potassium supplementation may be advisable pre- and post-operatively. There have been occasional reports of thrombocytopenia, leukopenia, agranulocytosis, aplastic anemia and precipitation of acute pancreatitis or jaundice.

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NEWS and ANNOUNCEMENTS

(continued from page 720)

Children's Clinics for December

December 1—Effingham General—St. Anthony Memorial Hospital

December 1—Litchfield—Madison Park School

December 1—Lake County Cardiac—Victory Memorial Hospital

December 6—Belleville—St. Elizabeth's Hospital

December 7—Carmi—Carmi Township Hospital

December 7—Alton Rheumatic Fever & Cardiac—Alton Memorial Hospital

December 7—Rock Island Cerebral Palsy—Foss Home, 3808 Eighth Avenue

December 7—Hinsdale—Hinsdale Sanitarium

December 8—Springfield General—St. John's Hospital

December 8—Bloomington—St. Joseph's Hospital

December 9—Chicago Heights Cardiac—St. James Hospital

December 9—Evanston—St. Francis Hospital

December 13—Peoria General—Children's Hospital

December 13—East St. Louis—St. Mary's Hospital

December 14—Springfield Cerebral Palsy (P.M.)—Memorial Hospital

December 14—Champaign-Urbana—McKinley Hospital

December 15—Effingham Rheumatic Fever & Cardiac—St. Anthony Memorial Hospital

December 15—Rockford—Rockford Memorial Hospital

December 15—Elmhurst Cardiac—Memorial Hospital of DuPage County

December 21—Chicago Heights General—St. James Hospital

December 21—Aurora—Copley Memorial Hospital

December 23—Chicago Heights Cardiac—St. James Hospital

December 27—Peoria General—Children's Hospital

Federal-State Radiation Program

A proposed federal-state program to create an elaborate radiation exposure record keeping system to aid in handling workmen's compensation claims for ionizing radiation workers is both unneeded and unworkable, a spokesman for the American College of Radiology declared recently.

In testimony prepared for presentation to a hearing of the Joint Committee on Atomic Energy, Dr. Antolin Raventos, a professor of radiology at the University of Pennsylvania in Philadelphia and chairman of the College's Commission on Radiologic Units, Standards and Protection, stated the ACR's opposition to the enactment of bills H. R. 16920 and S 3722. The bills would authorize the Atomic Energy Commission to work with the states to establish a permanent repository for the exposure records of all radiation workers. An employer would be responsible for keeping such records and forwarding them to state agencies. The states would pass the data along to federal record centers where it would be available if a worker later had cause to suspect that an injury or illness was caused by exposure to ionizing radiation during his employment.

"We are objecting to the creation of an elaborate system for which there is no demonstrated need," said Dr. Raventos. "We also object to the detailed effort involved in keeping records of unreliable exposure data, such as is obtained from film badge systems."

Dr. Raventos was one of several experts testifying against the bill on behalf of scientific groups in hearings scheduled September 20 and 21. In an earlier round of testimony, Atomic Energy Staff members had detailed their proposed program, saying that it would require records comparable to those required of AEC contractors.

Other medical and scientific groups invited to testify and expected to oppose the bills include the American Medical Association, the Health Physics Society, the National Council on Radiation Protection and Measurements, the American Association of Physicists in Medicine, the American Academy of General Practice, the American

(continued on page 724)

COOK COUNTY Graduate School of Medicine CONTINUING EDUCATION COURSES

Starting Dates — 1966

SPECIALTY REVIEW COURSE IN SURGERY, Part II, December 5
SPECIALTY REVIEW COURSE IN ORTHOPEDICS, November 28
SPECIALTY REVIEW COURSE IN MEDICINE, Part II, November 28
PATHOLOGY REVIEW COURSES FOR SPECIALTIES, Request Dates
SURGERY OF COLON & RECTUM, One Week, November 14
MANAGEMENT OF COMMON FRACTURES, One Week, November 14
GALLBLADDER SURGERY & SURGERY OF HERNIA, Nov. 14 & 17
PROCTOSCOPY & VARICOSE VEINS, One Week, December 12
BREAST AND THYROID SURGERY, One Week, November 28
VAGINAL APPROACH TO PELVIC SURGERY, One Week, December 12
SURGICAL & RADIATION TREATMENT OF GYNE. MALIGNANCIES, Nov. 14
SURGICAL & GENERAL OBSTETRICS, Two Weeks, November 28
ADVANCES IN CARDIOLOGY, Three Days, December 14
INFORMAL CLINICAL PROGRAMS IN SUBSPECIALTIES, First of any Week
ANESTHESIA, Inhalation, Endotracheal, Regional, Request Dates

Information concerning numerous other continuation courses available upon request.

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**THE PRESIDENT'S COMMITTEE
ON EMPLOYMENT OF THE HANDICAPPED**

NEWS and ANNOUNCEMENTS

(continued from page 723)

Society of Radiologic Technologists, the American Dental Association and others.

Dr. Raventos told the congressmen that both in atomic energy and the medical field, only a few claims have been made for workmen's compensation by workers claiming injury or sickness caused by radiation exposure. Further, he pointed out, the claims that have been made have been handled adequately by existing state compensation programs.

Effective means of controlling the occupational radiation exposure of workers in the various industries involved have been worked out and are in general use. Personnel radiation monitoring devices, such as the standard film badge which indicates radiation exposure according to the degree of blackening of the film, are only generalized indicators and are not accurate or reliable for measuring the exact cumulative dose received by the wearer, he said.

"A system to keep records of occupational exposures of individuals, based upon present personnel monitoring practices would be useless and worse, misleading. This is because the basic information desired cannot be obtained reliably from film badges or other dosimetric instruments worn by radiation workers," he explained.

Dr. Raventos also emphasized the problem in relating poorly recorded radiation exposures to the causation of illnesses for which such exposure might be only one possible cause. "As the group most familiar with the effects of occupational exposure to radiation, we feel strongly that legislative or regulatory fiat carrying the implication that occupational radiation exposure entails a high risk of incurring radiation-induced disease, is both unjustified and unwise and would tend to amplify greatly the difficulties of recruitment in this field where the shortage of trained personnel is already a matter of grave national concern."

AMWA Awards

Outstanding achievements in various media of communication within the medical world were recognized recently by the

American Medical Writers' Association. Five major awards were presented by Dr. William Hammond of New York, President of the A.M.W.A., during the course of the Association's Annual Meeting at the Waldorf-Astoria. Dr. Howard A. Rusk, pioneer scientist and practitioner in the field of medical rehabilitation and Associate Editor of the *New York Times*, received the Association's "Honor Award" for 1966 for "distinguished contributions to medical communication."

The A.M.W.A. "Harold Swanberg Distinguished Service Award," named for the founder of the Association, Dr. Harold Swanberg, was presented to Dr. Alexander Gode of New York, a distinguished linguist, Chief of the Interlingua Division of Science Service and editor and author of many books on the uses and learning of languages. This award is given annually to a member of the A.M.W.A. for "distinguished contributions to medical literature and distinguished service to the medical profession."

Dr. Hammond presented a special "President's Award" to Dr. Alexander Gutman, also of New York and Editor of the *American Journal of Medicine*, for his "unexampled service as Chairman of the Pro-

gram Committee, A.M.W.A."

The Association also presented Honor Awards "for Distinguished Service to Medical Communication," to Doctors Alton Ochsner of New Orleans and Michael E. DeBakey of Houston, Co-editors of "Christopher's Minor Surgery," which was cited as an outstanding example of modern medical textbooks.

Dr. Joseph Russell Elkinton of Philadelphia, Editor of *Annals of Internal Medicine*, the official journal of the American College of Physicians, was presented the A.M.W.A. "Award for Distinguished Service in Medical Communication."

The achievements of the medical profession in developing newer media of communication were noted by the presentation of a special citation and an Honor Award to Dr. George J. Robertson of Boston, Editor of the "Boston Medical Reports."

Erratum

The following reference was omitted in the October IMJ article, "Pharmacologic Factors in Relapse and Possible Use of Narcotic Antagonists in Treatment":

6. Martin, W. R.: An Experimental Study in the Treatment of Narcotic Addicts with Cyclazocine, *J. Clin. Pharmacol & Therap.* 7:455-465, 1966.

Also, reprint acknowledgment is made to the Journal of Clinical Pharmacology and Therapeutics for publication of the article published in October IMJ.

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OBITUARIES

ISMS Past President Dies

ISMS Past President Clifford Paul White*, aged 75, died October 21 of a heart attack while visiting with his daughter in Amarillo, Texas. Dr. White served as president of our society in 1952 and also, upon the incorporation of the Spastic Paralysis Research Foundation in August of that year, served as a member of their board. Dr. White practiced for 40 years in the Kewanee, Illinois area, retiring to Ft. Lauderdale, Florida in 1960. Other offices he held included governor of the Illinois-Eastern Iowa District of Kiwanis International from 1939 to 1940 and board member of the All American Life & Casualty Company for 15 years since the inception of the company in 1951.

Aaron Arkin*, Chicago, died November 1, aged 78. Dr. Arkin was a physician and educator for more than 50 years. He was a founder of the Cook County Graduate School of Medicine in 1932, and served on the staffs of Wesley Memorial, Columbus, and Mount Sinai Hospitals in Chicago. He also served as chairman of the department of medicine in Weiss Memorial Hospital. The doctor was a member of the ISMS Fifty-Year Club since 1962. He received his M.D. degree from Rush Medical College in 1912. In 1913, he was awarded a Ph.D. degree in pathology and pharmacology from the University of Chicago. From 1914 to 1922, Dr. Arkin organized and directed the West Virginia State Hygienic laboratory of the University of West Virginia, and also served as a contract surgeon for the United States Army Medical Corps during World War I. In 1922, the doctor became chief bacteriologist and research as-

sociate in Wenckebach Medical Clinic of the University of Vienna for four years. He served as professor of medicine at Rush Medical from 1929 to 1956, when he became professor emeritus.

Selmar N. Arnsdorf*, Chicago, died October 8, aged 69. Dr. Arnsdorf practiced medicine in Germany from 1925 to 1938. In the United States, the doctor was a senior staff member of the Illinois Masonic Hospital, a member of the American Medical Association, and a 20-year member of the Illinois State Medical Society.

George P. Ballard*, River Forest, died October 14, aged 56. Dr. Ballard, physician and surgeon, was a specialist in internal medicine, and served from 1946 to 1966 on the staff of Hines Veterans Hospital. During World War II, he served for five years with the medical corps of the Air Force. Dr. Ballard was a member of the Chicago Medical Society, a 17-year member of the Illinois State Medical Society, a member of the American Medical Association, American Society of Internal Medicine, and a Fellow of the American College of Chest Physicians. Dr. Ballard graduated from Carleton College, attended Northwestern University, and interned at the Illinois Central Hospital.

George W. Bohr*, died September 16 in Ft. Lauderdale, Florida, where he lived in retirement since 1958. Before retiring, Doctor Bohr was an active member of the Chicago Medical Society as well as the Illinois State Medical Society.

Edmond J. Cahill*, 63, died October 18 of a heart attack. A physician and surgeon, Dr. Cahill practiced medicine in Evanston, Illinois for the last 23 years and served on the staff of the St. Francis Hospital, also in Evanston. Dr. Cahill was a 20-year member of the Illinois State Medical Society; a graduate of the Stritch School of Medicine, Class of 1943.

F. Raymond Crooks, Chicago, died September 13 at the age of 78. Dr. Crooks was a member of the Chicago Medical Society since 1914.

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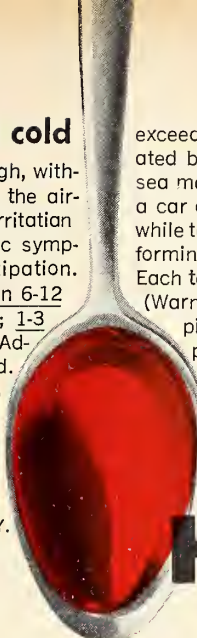
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Illinois Medical Journal

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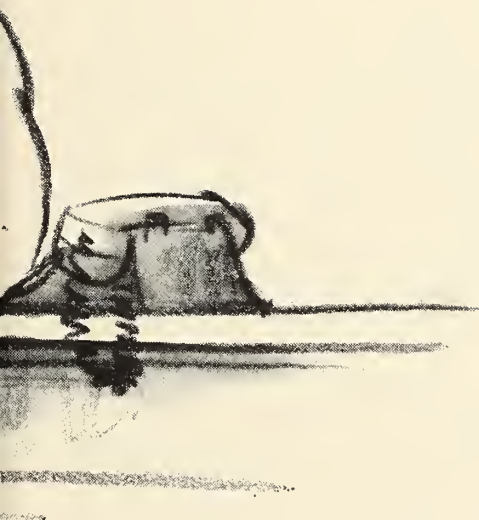
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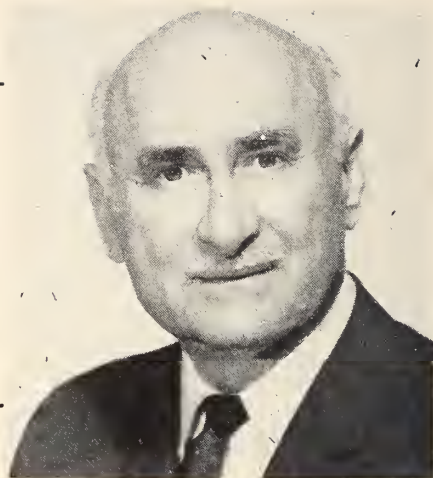
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The president's page



Caesar Portes, M.D.

DOCTOR SHORTAGE

THERE IS A SERIOUS DOCTOR SHORTAGE throughout the country. It is more serious than many physicians realize. This shortage could have an increasingly serious effect upon the health of the nation. The AMA Council on Medical Education and Hospitals acknowledged the need for some 10,000 graduates by 1975. Measured against that goal, the present medical school expansion program is inadequate. Our 88 medical schools graduated 7,409 physicians in 1965. Fourteen new schools and 1,000 additional graduates per year are now forecast for 1975. This increased output will not balance projected population growth. It will not even come close to the goal of 10,000 graduates annually.

What then is the solution to this problem? What can we do to help solve it? First, I think it is essential to recognize there must be an increase of students entering medical schools. We must at least double the number of medical school graduates as quickly as possible by building many more medical schools and greatly expanding existing ones beyond anything now contemplated. Such a bold program will obviously require massive government aid for construction purposes.

We must encourage high school and pre-college students to become interested in medical education. We must speak to them

and enlighten them and encourage them with the necessity of accepting a career in the field of medicine. Too many students are fearful of this program because they feel they are incapable of meeting the qualifications and too many still think that the program is too long and too costly. We must find ways of telling these young people about a medical career. We must influence them. We must make the course appealing and interesting. And, of course, we must make financial aid available to them because many of these students really cannot afford the cost of a medical education.

I think another answer to the problem is one of supply and demand. In Illinois, for example, there are many small towns where the doctor shortage is very acute. There are perhaps one or two doctors for a population of 5 or 6,000 people. The Illinois Agricultural Association and the Illinois State Medical Society are making a valiant effort to obtain doctors for these rural areas. The program is one whereby students are given loans to be able to take the four years of medical education at the University of Illinois. This is, I think, a good program. However, of the total number of students now at the university's medical school—from the freshman through

(continued on page 797)

Election Results Significant for Physicians

By James Scott Brady

*Illinois State Medical Society
Public Affairs and Legislative Representative*

SIGNIFICANT POLITICAL CHANGES have taken place as a result of the recent election.

What is the fate of the physician going to be now that the complexion of the Congress and the Illinois State Legislature has changed?

It should be obvious that with the Republicans gaining 47 seats in the Congress, conservatives will be much stronger and many times will be a majority on issues.

The previous Democrat margin was 155, or 295 to 140, in the House. Now this margin has been cut to 61, or 248 to 187. While this margin still looks rather wide, 82 Southern Democrats do not give whole-hearted support to Johnson. In reality, no more than 180 votes can be counted on by the White House.

Look also for the shift in the Senate to be important. Illinois' Senator Dirksen will now be in a greater position to block presidential legislation than before.

The Johnson administration has been hit by a protest vote of a greater magnitude than anyone expected.

This "protest vote" can be regarded as a setback for the liberals in the Congress.

Another factor to consider is how well the "LBJ Fabulous Freshmen" did. In their bid for re-election the 44 Democratic freshmen had 19 casualties, electing only

25 of the original number. Of the seven Republicans who unseated Democrats two years ago, six won and one lost.

President Johnson personally campaigned for 54 candidates and of this number 29 won and 25 lost.

Significant also is the fact that the Republicans elected governors to 25 states involving 293 electoral votes and the Democrats elected governors to 24 states with only 230 electoral votes. (Georgia with 12 is still undecided . . . D.C. has 3 . . . needed to elect . . . 270.)

Nationwide, the Republicans captured 28,557,600 popular votes or 54.1%. The Democrats got 24,257,200 popular votes or only 45.9%.

In Illinois, the Republicans kept control of the State Senate and recaptured the State House of Representatives.

In the Senate, there will be 39 Republicans and 19 Democrats. Needed to control . . . 30 seats.

In the House there will be 99 Republicans and 78 Democrats. Needed to control . . . 89.

Illinois gained one new congressional seat in the 19th Congressional District (Rock Island, Galesburg, etc.) making the total in the Illinois Congressional Delegation—12 Republicans and 12 Democrats.

Charles Percy's victory over Senator Douglas will greatly aid Senator Dirksen and his "crop" of newcomers.

Across the nation, as a result of the 1966 election for state legislatures, the Republicans will control 18 state senates (12 before the election for a gain of six), 22 lower houses (a gain of 14) and in 16 states they will control both houses (a gain of 10).

Overall, the Republicans picked up 677 seats when in 1964 they lost 529 seats.

What do these changes mean?

The election traffic signal was green in 1964. Today its amber glow can be seen quite well from 1600 Pennsylvania Avenue. A slow-down on legislation is mandatory.

House	Elected in 1966	Change
Liberals	163	-31
Conservatives	196	+27
Moderate	59	+ 4
Unclassified	17	

Senate	Elected in 1966	Change
Liberals	9	-2
Conservatives	16	-2
Moderate	9	+4
Unclassified	1	

The all important committees will now be readjusted to reflect these new conservative changes. They will be less likely to

respond to the White House wishes and more independent in their judgment.

When the 90th Congress convenes in January it won't repeal Medicare or the "Great Society." However, we can safely expect a saner approach to the solution of the problems we must face as a nation.

Certainly, Nov. 8, 1966, had every indication of a requiem for the liberals. How long they will remain "buried" depends on how well we offer our constructive suggestions, plans and alternatives to Great Society social planners.

We have sometimes gotten so wrapped up in being "against," that we have forgotten that the argument is properly not about *whether* the problem should be solved, but *how* it should be solved.

The heart of the conservative movement is not that people need to be poor or sick or that resources need to be wasted or destroyed . . . it is rather that conservatism through freedom and personal incentive and adequate profit, can solve these problems *better* than through a total reliance on big government . . . and stay free.

We need to consider these problems without primary concern for partisan gain. We should suggest solutions because they are needed and because they are right.

We have to sell the principle. We have to develop the method. We have to see that it works. And in doing this, we have to try harder than the other side because, despite our opportunity with the new 90th Congress . . . "we are still only number two."

National Health Legislation

High on the list of health legislation to be considered by the new Congress convening Jan. 10 are proposals to amend both the medicare and medicaid programs.

Proposed medicare amendments would extend the program to the disabled, include podiatrists' services, add out-patient drugs to Plan B, and authorize that billing for services of hospital-based physician specialists be put back under hospitals.

Sen. Russell B. Long, (D., La.), chairman of the Senate Finance Committee

which handles medicare and medicaid legislation, is pushing a proposal designed to get physicians to prescribe drugs by generic terms for patients under federally-aided medical programs. Such an amendment died in a conference committee in the final days of the last Congress.

Amendments to limit federal expenditures under medicaid (Title XIX) are expected to get early consideration by the House Ways and Means Committee. The
(continued on page 806)

TOXIC MEGACOLON

Earl Richard Ensrud, M.D./urbana

TOXIC MEGACOLON IS A SERIOUS complication of ulcerative colitis that may occur early or late in the course of the disease. It may develop during a fulminating first attack or during an acute relapse of chronic ulcerative colitis.¹⁻⁶

The clinical picture of toxic megacolon suggests almost complete obstruction of the colon with impending perforation. The abdomen is protuberant, distended, and quiescent with the bowel sounds being absent, or weak and feeble. At times the abdominal distension is so great as to embarrass respiration, and the patient has shallow, rapid, and labored breathing. Profound toxicity is an almost constant accompaniment of the condition. The patient has a spiking fever with temperatures ranging from 100°—105°F, tachycardia, drawn facies, and listlessness. There may also be abnormalities of the sensorium, so that the patient may be agitated, anxious and apprehensive.

Leucocytosis with neutrophilia is a frequent laboratory finding in toxic megacolon. Other laboratory tests may show nutritional deficits with there being anemia, hypoalbuminemia, and hypoprothrombinemia. On occasion there may be noted hypokalemia, and this may in some patients play a part in the dilatation of the colon. The scout

film of the abdomen will show marked dilation of a segment of the colon or the entire colon. Nodularity and pseudopolyps may also be discernible upon examination of the abdomen x-rays.⁷

Complications of ulcerative colitis which are more prominent in toxic megacolon are free perforation of the colon, thrombophlebitis, and liver disease. Massive hemorrhage is not more common in toxic megacolon than in the usual ulcerative colitis.

In toxic megacolon the colonic wall is thinned with the circumference of the dilated colon varying from 9-20 cm. The dilation may be segmental or involve the entire colon sparing only the rectum. The transverse colon is most frequently and most severely involved. Microscopically there is marked inflammation and damage to the muscle layers of the colon. There is also noted marked capillary proliferation in the muscle layer. The myenteric plexus may be involved in the inflammatory process with injury or destruction of the ganglion cells.

Toxic megacolon is a medical emergency, and its treatment should be vigorous and comprehensive. If the scout film of the abdomen shows free air and conclusive evidence of perforation of the colon, surgical treatment is mandatory. A subtotal colectomy and ileostomy are the surgical procedures of choice, although there is not complete agreement on this point by the various authors who have written on this subject.¹⁻⁶ If there is no evidence of perforation a brief 3-10 day course of medical therapy may be initiated. The medical therapy of toxic megacolon consists of: (1) complete bowel rest by the use of gastrointestinal intubation and suction drainage, (2) intravenous fluids to replace electrolyte, vitamin and fluid losses, (3) blood transfusions and plasma transfusions for the anemia and hypoproteinemia, (4) broad spectrum antibiotics, (5) analgesics and sedatives, and (6) the consideration of ACTH and/or corticosteroids. Penicillin (1,200,000 units intramuscularly b.i.d.) and streptomycin (0.5 gms. intramuscularly b.i.d.) may be used for seven days. If the

Carle Clinic, Urbana

patient is allergic to penicillin, tetracycline in the dosage of 1 gm. intramuscularly or intravenously is given every eight hours. Some authors feel that a trial of ACTH or corticosteroids is indicated. The dosage suggested for ACTH is 20-40 units intravenously per day or 80-120 units intramuscularly per day. If corticosteroids are used the suggested dosage is 300-400 mgs. intramuscularly each day of hydrocortisone.

Factors which may play a role in the development of toxic megacolon are: (1) the profound toxicity, (2) aerophagia, (3) relative distal stenosis of a segment of the colon, (4) hypopotassemia, (5) anticholinergics and narcotics, and (6) barium enema examination.^{2, 4} Because of the profound toxicity, there is marked inflammatory damage to the muscle layer and perhaps to the myenteric plexus; this damage would facilitate the distension of the colon. The colon is adynamic and peristaltic activity is weak so that the use of anticholinergic drugs and narcotics may further aggravate this situation. It is the clinical experience of several authors that barium enema examination in fulminant ulcerative colitis may precipitate an episode of toxic megacolon.

The differential diagnosis of toxic megacolon includes: (1) typhoid fever, (2) acute bacillary dysentery, (3) acute amebic colitis, (4) mechanical obstruction of the colon, and (5) congenital megacolon. Typhoid fever, acute bacillary dysentery, and amebic colitis may at times be so severe as to produce a clinical picture similar to toxic megacolon. During the course of ulcerative colitis, carcinoma of the colon may occur and produce a mechanical obstruction, which must be differentiated from toxic megacolon.

Case History

The patient, Mr. C. H., was a 29-year-old graduate student at the University of Illinois, who was seen in consultation at McKinley Hospital on Oct. 27, 1963. He had been ill since September, 1963 with abdominal cramps, diarrhea, and weight loss.

Sigmoidoscopy and barium enema had

revealed an ulcerative colitis involving the entire colon. The ulcerative colitis had progressed despite several weeks of medical treatment, which had included diet, azulfidine, antibiotics, antispasmodics, corticosteroids, and ACTH. On Oct. 25, his condition had worsened and he became profoundly toxic with high fever (104° F), severe abdominal pain, and frequent small bloody bowel movements. Physical examination revealed a critically ill young male with a markedly distended abdomen, which on auscultation had infrequent weak bowel sounds.



Figure 1

The scout film of the abdomen on Oct. 27 (Fig. 1) showed marked dilatation of the entire colon, most pronounced in the transverse portion. The hemoglobin was 11.6 gms. /100 ml., the erythrocyte count was 3,800,000/cu. mm., and the leucocyte count was 20,600/cu. mm. The differential white count indicated the toxicity of his condition; there were 73% neutrophils, 5%

juvenile cells, 6% myelocytes, 6% promyelocytes, 8% lymphocytes, and 2% monocytes. The blood ureas was 41 mgs./100 ml., the chlorides 95 mEq./L., the sodium 134 mEq./L., the carbon dioxide combining power 24.4 mEq./L., and the potassium was somewhat low being 3.7 mEq./L. The urinalysis showed a 2+ albuminuria, and the urine had granular casts and hyaline casts.

The patient had continued to deteriorate during his several weeks' stay at McKinley Hospital, and hence he was transferred to Carle Memorial Hospital, where surgical therapy was undertaken on Oct. 28. The patient had been receiving steroids, and, therefore, he was given intravenous and intramuscular hydrocortisone preoperatively and for five days postoperatively.

Upon laparotomy the entire colon was found to be involved and the surgeon performed a subtotal colectomy and ileostomy. The postoperative course was rocky, but the patient steadily improved, and was dis-

charged from the hospital on Nov. 22, 1963.

His condition improved rapidly in the two months after hospital discharge, and he was able to return to graduate school in February, 1964. In June, 1964 he returned to Carle Memorial Hospital and the rectal stump was removed without difficulty. He has continued to feel well and since September, 1965 has been a teacher at a college in North Carolina.

Summary

Toxic megacolon is a serious complication of ulcerative colitis, which may occur early or late in the course of the disease. Toxic megacolon may be treated by an intensive and comprehensive medical regime for a 3-10 day period if there is no evidence of perforation of the colon. Perforation of the colon and continuing deterioration of the patient's condition are indications for surgical intervention. It is believed that subtotal colectomy and ileostomy are the surgical procedures of choice.

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IMJ

**SURGICAL
GRAND
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CASE PRESENTATION

Unusual Bladder Tumor

This case report was part of Surgical Grand Rounds held at Passavant Memorial Hospital on March 19, 1966.

Dr. Robert Wendel: The patient is a 56 year old white male who developed bright red, gross total hematuria nine months ago, in July 1965. He was hospitalized at this time in Colorado for urologic investigation. When cystoscopy was performed a small lesion was seen just within and on the right side of the bladder neck. This was excised with a resectoscope and a pathologic diagnosis of adenocarcinoma was made. The patient was referred to Passavant Memorial Hospital for further care. Cystoscopy in September 1965 revealed granulation tissue in the area of the previous excision. This was biopsied and the pathological diagnosis was chronic inflammation; no tumor was observed. In December 1965 the patient was again subjected to cystoscopy and a lesion, one cm. in diameter, was again found in the same site. Excision was accomplished with a resectoscope. Again a pathological diagnosis of adenocarcinoma was reported. It was suggested that origin from the prostate should be considered. He was admitted to the hospital in February 1966 for investigation and treatment. During the interval since July, the patient had felt well and gross hematuria, frequency and dysuria had been absent. Physical examination was within normal limits except for one small area of induration in the right lobe of the prostate. Urinalysis: 8-10 red blood cells and 2-3 white blood cells per high power field. The remainder of the laboratory studies, including alkaline and acid phosphatase were normal. Excisional biopsy of a small depressed lesion was made in the area of the previous neoplasm transurethrally on February 10, 1966.

Dr. Joseph Sherrick: The biopsy which was obtained from this patient presented a number of problems from the histo-pathologic point of view. In the section of the

original biopsy made in Colorado, there is normal bladder mucosa partly replaced by tumor. In many places the tumor has a tendency to form glands but in many other places it appears to be undifferentiated. The other pathologists called this a poorly differentiated adenocarcinoma in the urinary bladder and suggested that the origin might be from the prostate. On careful search of this specimen one can find a transition from normal mucosa to the beginning of tumor (Fig. 1). Both transi-

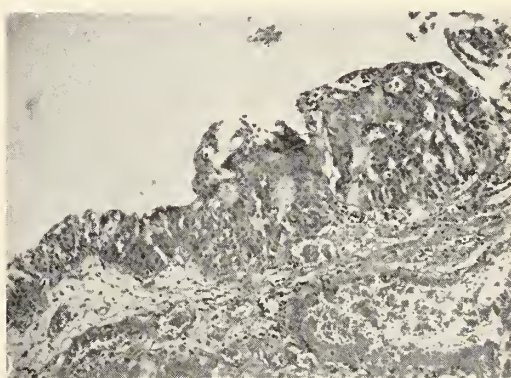


FIGURE 1. Photomicrograph showing normal bladder mucosa on left, with transition to tumor on right. (x 160) (S-1595-65)

tional epithelium and gland formation were observed (Figures 2 and 3). Sections from the other biopsies mentioned by Dr. Wendel also showed a mixed appearance with both glandular and urothelial elements. The tumor invades the bladder wall. At this point in the patient's history it was our opinion that this tumor was a poorly differentiated adenocarcinoma. We were doubtful about the transitional element in the tumor. We could not determine the site of origin of the tumor, and thought that origin from the prostate should be strongly considered.

Dr. Wendel: Because of the pathological diagnosis, the phosphatase studies were

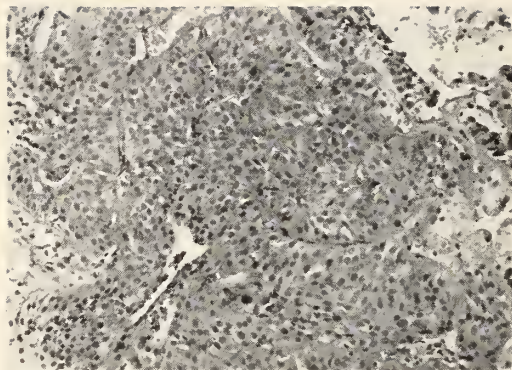


FIGURE 2. Photomicrograph of bladder tumor showing resemblance to transitional epithelium. (x 200) (S-1595-65)

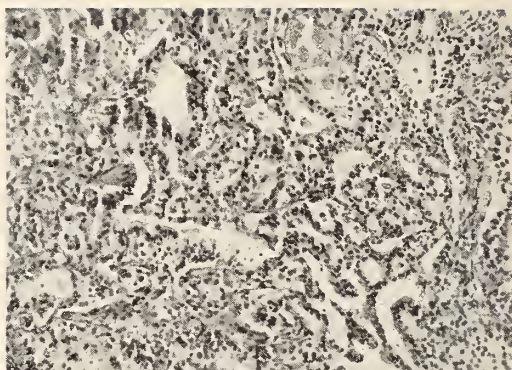


FIGURE 3. Photomicrograph of bladder tumor showing abundant gland formation. (x 200) (78669)

repeated with the assumption that this might still be a prostatic lesion, but these were again within normal limits. A bone marrow biopsy was done and malignant cells were not found. Because the patient was a relatively young man, and in good condition, and had an invasive recurrent tumor, on February 16, 1966 he was subjected to a radical retropubic prostatectomy and excision of the area in the bladder in which the lesion had been present. The excision avoided the right ureteral orifice so that the ureter did not have to be re-implanted. The patient did well after operation and left the hospital March 8, 1966.

Dr. Sherriek: The specimen included the bladder neck, the entire prostate and the seminal vesicles. On the right side of the bladder neck there was a poorly defined ulcer. The prostate appeared normal grossly. We examined this specimen very thoroughly, making multiple sections through the entire bladder and prostate. Sections through the ulcerated area in the bladder showed that it was covered by acidophilic necrotic debris (Fig. 4). The base of the ulcer was acutely inflamed, and the inflammation extended into the muscle. We did not find residual tumor in the urinary bladder or prostate, which showed glandular hyperplasia. It is our opinion that this was a primary carcinoma of the urinary bladder. The origin of the glandular elements is uncertain. Adenocarcinoma of the bladder can arise in several ways. Mucinous adenocarcinoma may arise from

urachal remnants in the fundus, from the mucinous glands at the base of the bladder, and from the extrophied bladder. However, this was not a mucinous tumor. More commonly the presence of glands in a bladder tumor results from metaplasia, which usually occurs in poorly differentiated transitional cell carcinomas. According to our own experience and that of Wallace,¹ who has seen over 3,000 of these tumors, metaplasia of some kind; either squamous or glandular metaplasia, occurs in about 17 percent of the poorly differentiated transitional cell carcinomas. The combination of clinical, gross and microscopic findings lead us to the opinion that this tumor was a poorly differentiated transitional carcinoma of the urinary bladder with glandular metaplasia.

Dr. John Grayhack: This is an unusual problem in that the histologic character of the tumor is unusual. This patient presented with a typical history for a bladder neoplasm, namely, with gross hematuria and the urologist who initially treated him was convinced that he had a bladder neoplasm. However, the pathologist reported an adenocarcinoma, probably of prostatic origin. As Dr. Sherriek pointed out our pathologists thought initially that this was probably adenocarcinoma of the bladder, not of prostatic origin. Interestingly enough the patient was treated with estrogens in Colorado on the basis of the finding of the adenocarcinoma. On the first cystoscopic examination here, I im-

perically biopsied the area of the initial excision and took several biopsies from the area of the bladder neck and did not find evidence of tumor while he was receiving estrogens. The estrogen was discontinued and the patient was found to have a relatively superficial lesion when next examined. About 8 weeks later he was found to have again an adenocarcinoma. At this point it was thought that origin of the tumor from the prostate could not be excluded, although the pathologists were not unanimous in this opinion. For

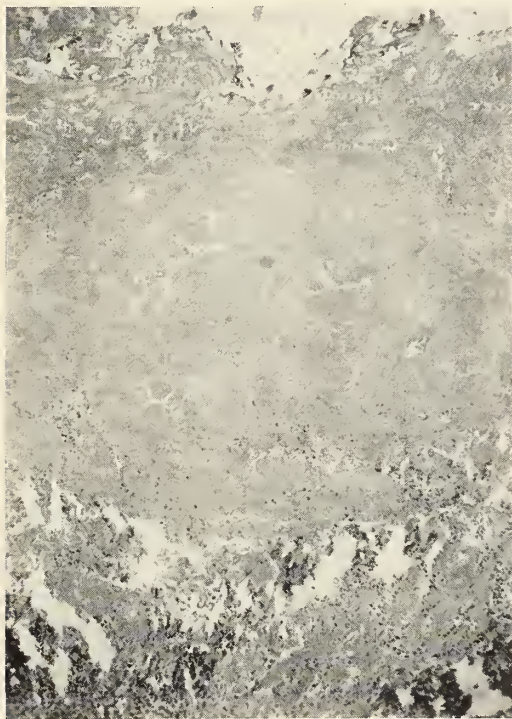


FIGURE 4. Photomicrograph of bladder ulcer, showing necrotic material replacing mucosa, with inflamed muscle at base. Note that no tumor is present. (x 80) (74939)

that reason the surgical procedure was performed as described. With regard to bladder tumors, the prognosis is dependent upon two factors; one is the stage of the lesion which is illustrated by Marshall's modification of Jewett's classification of bladder staging (Fig. 5). Those lesions that extend less than half way through the muscle, regardless of histologic grade, have good prognosis with almost any type of modern therapy. In general five-year sur-

vival exceeds 50 percent. Lesions that extend deeper than half way through the muscle, well into the muscle or a C lesion (into the perivesical area) have a poor prognosis whatever the therapy might be at the present time. The other factor in prognosis is the histologic grade and this is of less importance. Dr. Sherrick has mentioned that adenocarcinoma of the bladder is extremely unusual. In 1,400 bladder tumors reported by the AFIP 17 are classified as adenocarcinoma. In a series reviewed by Dr. Lowell King of our department with Dr. Hugh Jewett, 8 out of 365 patients had a diagnosis of adenocarcinoma of the bladder.² Most of these were mucin-forming adenocarcinomas and not the type of lesion that has been discussed here. The present case may represent a prostatic lesion. Prostatic tissue does occur at the bladder neck. The possibility of prostatic origin is supported by the response to the estrogen treatment that the patient received. While the patient was taking estrogens, the tumor was not detectable. Hormonal therapy for carcinoma of the prostate, as well as hormonal therapy for carcinoma of the breast, is palliative. It is not thought to eliminate the neoplastic cells, but simply to depress their growth. When this patient's estrogen was omitted, his lesion became apparent again. This supports the contention that the lesion might have arisen from aberrant prostatic cells.

During the operation, the bladder was partially excised and the entire prostate was taken out en block. This left a defect between the bladder and the urethra with a problem of reconstruction of the resultant defect. The bladder neck was revised and an anastomosis performed with the distal (membranous) urethra. These patients are impotent, although a small percentage of them do have sexual function without ejaculation. In addition, many have temporary incontinence for 2-4 months, varying from total to stress. This man was fortunate to be continent immediately. Almost all of them will regain urinary control after a few months; probably the final incidence of incontinence for radical pros-

tatectomies for a localized lesion would be about one percent.

Dr. John Beal: Would you indicate your estimate of the prognosis for this man?

Dr. Grayhack: I feel that it is good. Segmental resection in the treatment of bladder carcinoma has been questioned because bladder carcinomas often arise in multiple sites and what has been called recurrent may not be recurrence, but rather new tumor growths. However, almost all authors who employ segmental resection, report good results. Marshall had a 64 percent 5-year survival in a relatively small series of low grade and low stage tumors, 29 percent in the high grade and high stage and 56 percent in the high grade and low stage. Similar figures appear in Jewett and King's series. The survival rate

for segmental resection is similar to the survival rate for total cystectomy for comparable stages.

Dr. Paul O'Brien: Was it felt preoperatively that this was prostatic cancer?

Dr. Grayhack: Yes.

Dr. O'Brien: How much extension of the disease do you accept in considering the patient a potential candidate for surgical treatment?

Dr. Grayhack: Usually extension into the trigone is a contra-indication for radical prostatectomy. If there is local extension into the levators or other evidence of dissemination I will not usually do a radical operation. In the present case, we did not know the origin of the tumor and considered it to be a localized lesion which presented intravesically. We decided to

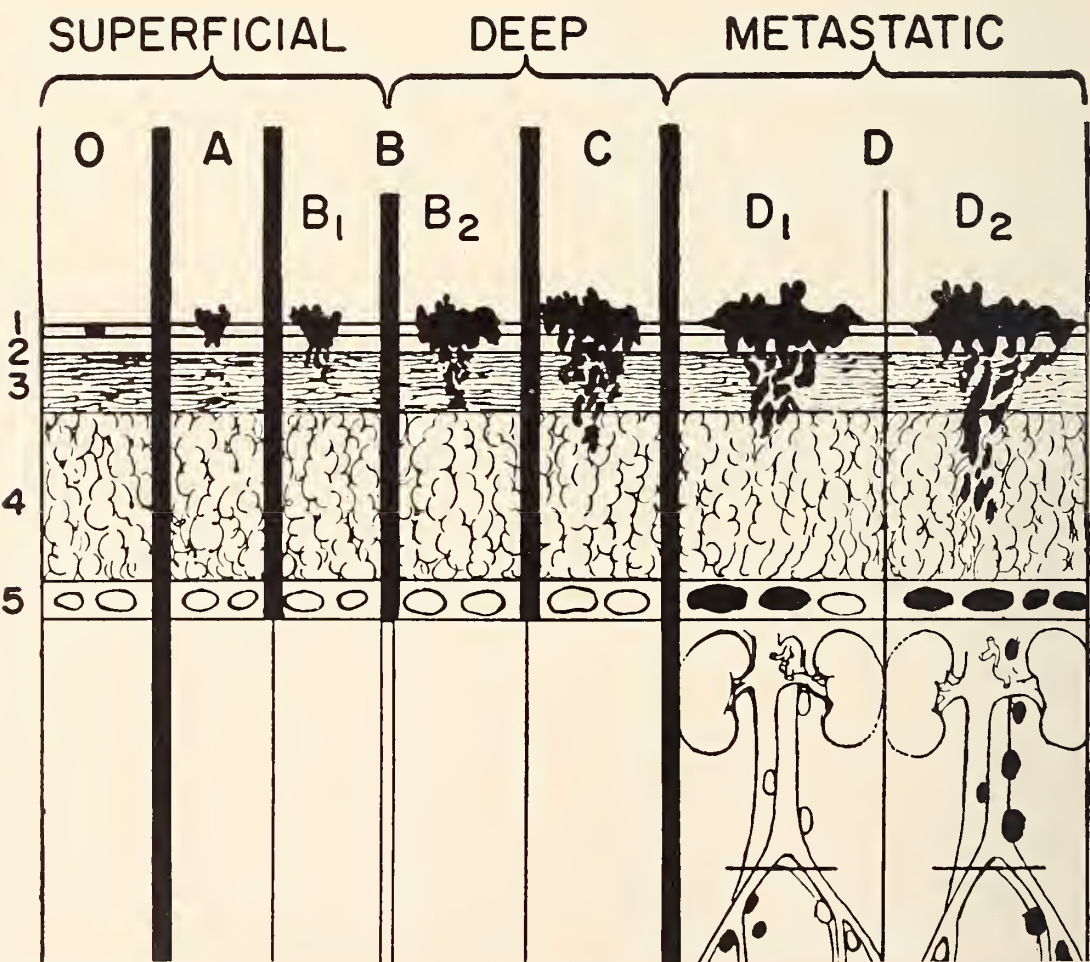


FIGURE 5. Classification of staging of bladder cancer (reprinted from Victor F. Marshall. Bladder Tumors. A Symposium. J. B. Lippincott Co., Philadelphia, 1956, page 4, with permission of publisher).

take out the prostate and the involved segment of bladder. We did an extensive operation on the basis that this neoplasm probably arose within the prostate.

Dr. Bcal: Would you comment on resection of the prostate from the abdominal approach versus the perineal approach? Many urologists prefer to perform a radical prostatectomy through the perineum and accomplished this through the abdomen in this patient.

Dr. Grayhack: Not all urologists prefer to remove the prostate through the perineum. The advantages of the perineal approach are (1) avoidance of rectal injury because in the perineal approach the

rectum is more readily seen, (2) the urethra and bladder are easily approximated, and (3) dependent drainage is achieved. The advantages of abdominal prostatectomy are (1) a segmental resection of the bladder may be included, and (2) removal of the seminal vesicals is easier. It is more difficult to anastomose the bladder neck to the urethra from above and in general the blood loss is apparently higher.

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BREAST CANCER

Breast cancer, like other cancers, has very definite patterns of metastases and these patterns of spread are all-important in determining the future of the patient. Soft tissue recurrence and spread, i.e. chest wall and lymph node metastases, carries the best prognosis. Primary bone involvement is next while visceral involvement, i.e. brain, liver and lung, is extremely resistant to treatment. An exception to this is pleural metastases with fluid formation, which is very amenable to treatment and should probably be grouped with soft tissue disease. The age and menstrual status are also well-known determinants. The older woman who is 10 years or more post-menopausal is usually very responsive to therapy while the young, menstruating woman is not. Knowledge of the "free interval" is also useful in selecting patients, the "free interval" being the period from definitive treatment (such as mastectomy) to the time of recurrence. Patients with a long "free interval" (especially of four years or more) are prone to fall into the responding group. Thus, the older post-menopausal woman who develops metastases that primarily involve the soft tissue and whose mastectomy was performed four years or more previously, will probably be an excellent candidate for treatment. At the other extreme is the young, menstruating woman with visceral involvement that occurs shortly after definitive therapy. She has an extremely grave outlook regardless of the therapy used. This is not meant to imply that these criteria are infallible, but they are useful in the overall evaluation of the patient. These guidelines will be helpful in advising the patient and family as to further treatment, the aggressiveness and persistence of the treatment, and disease priority if another serious illness intervenes. *Disseminated Breast Cancer*, T. C. Alfred, M.D., Washington, D.C. *Clinical Medicine* (Aug.), 1966, p. 45.



THE VIEW BOX



Leon Love, M.D.
Director, Diagnostic Radiology
Cook County Hospital

The patient was a 60-year-old cirrhotic female who had complained of abdominal pain and fever for a 10-day period. She had been getting along fairly well on an out-patient basis requiring a monthly abdominal paracentesis which yielded between

1000-1500 cc of clear fluid. Physical examination revealed shifting dullness in both flanks and tenderness in the R.U.Q. with numerous scars resulting from paracentesis.

What's your diagnosis?? (Fig. 1)

- (1) Volvulus of the cecum
- (2) Hepatoma
- (3) Intrabdominal abscess
- (4) Diverticulitis

answer on page 799

DIFFERENTIAL DIAGNOSIS OF INFLAMMATION OF THE OPTIC NERVE HEAD

Marcel Frenkel, M.D./chicago

PAPILLITIS IS A COMMON INFLAMMATORY process involving the optic nerve head which may clinically simulate the appearance of papilledema. It is associated in some instances with an inflammatory process in the choroid and the retina and occasionally with diffuse neurologic or systemic disease. Most frequently, however, the papillitis appears without concurrent evidence of intraocular inflammation. It is the purpose of this communication to present several cases illustrating this diagnostic problem.

Case Reports

A systemic inflammation was associated with papillitis in two instances of this series.

Patient 1 is a 30-year-old male who developed fever, headache, diplopia, progressive unsteadiness of gait and incoordination of hand movements, some 10 days after a gastroenteritis. He also noted regurgitation of liquids into the nasopharynx and paresthesias over the distal extremities progressing proximally. The neurological examination corroborated a peripheral neuropathy. In addition, there was a bilateral partial ptosis and a right abducens palsy. The pupils were unequal but reactive. The diagnosis of post-infectious radiculoneuropathy (Guillain-Barré syndrome) was made. On treatment with corticosteroids, im-

provement in the neurological symptoms ensued, but during the course of hospitalization a mild edema of both nerve heads was noted. Vision, however, remained at 20/20 while visual field examinations demonstrated a slight enlargement of the blind spot. The cerebral spinal fluid pressure was normal. Recovery of all neurological function was evident within six weeks of the onset of the disturbances with regression of the edema of the optic nerve head.

Patient 2 is a 23-year-old male who presented to the Emergency Room with a fever of 104° F associated with pyelonephritis. On admission, vision was said to be unimpaired. Treatment with antibiotics resulted in deferescence and resolution of pyuria. After three days, however, vision in the left eye was noted to be reduced to counting fingers at six feet while vision in the right eye was 20/20. Marked edema of the left optic nerve head was apparent with engorgement of the large retinal veins and distention of small vessels on the nerve head. Peripapillary edema was present and extended to the macula, with apparent lipid deposits forming a macular star (Fig. 1).

The right retina and optic disc were normal. The neurological examination was non-contributory. The spinal fluid examination revealed a total protein content of 96 mg%.

Visual field examination demonstrated a dense central scotoma in the left eye to 1 and 2 white test objects. A pneumoencephalogram was normal. On treatment with systemic corticosteroids the papillitis in the left eye gradually receded over a period of three months with return of vision to 20/40 at which time the left disc was slightly erythematous in its nasal portion, but manifested pallor in the superior temporal quadrant. A few lipid de-

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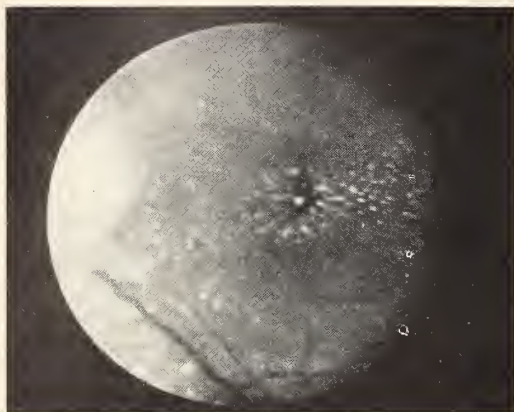


Fig. 1. (Frenkel) Photograph of fundus of patient 2 showing peripapillary edema and macular edema forming a "macular star."

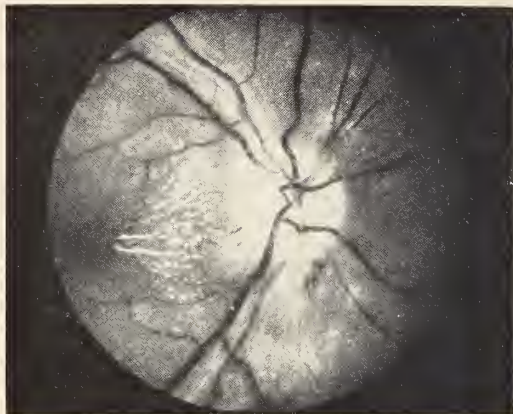


Fig. 2. (Frenkel) Photograph of fundus of right eye of patient 5 illustrating edema of the nerve head, hemorrhages below the disc and edema involving the papillo macular bundle.



Fig. 3. (Frenkel) Photograph of the left fundus of patient 5 illustrating healed inactive chorioretinitis.

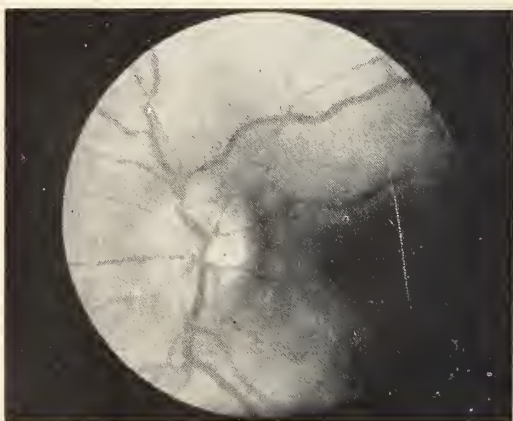


Fig. 4. (Frenkel) Photograph of the fundus of patient 8 illustrating venous engorgement and edema of the nerve head, principally nasally.

posits were visible surrounding the macula. The visual field had returned to normal save for a well defined area of blurring superior-nasally.

The following three case reports illustrate the association of papillitis with uveitis:

Patient 3 presented at the clinic at age 7 with a gradual decrease in vision in the right eye to 20/200. The anterior chamber of both eyes showed +1 flare and occasional cells. Posterior synechiae were noted at the left inferior pupillary margin. Many cells were present in the vitreous. With the Hruby lens it was possible to visualize the optic discs which were edematous. Peripapillary retinal edema was noted bilaterally. The veins were markedly dilated but compressible to digital pressure. The neurological examination revealed the spinal fluid to be free of pleocy-

tosis; its protein content and pressure were normal. Visual fields were not completely reliable and no central scotoma could be identified. On systemic treatment with dexamethasone, visual acuity improved to 20/25 in the left eye while remaining at 20/200 in the right eye. The patient was readmitted to the hospital for study at age 10, at which time the vision was found to be unchanged with persistence of papilledema and vitreous haze in both eyes. Again it was felt that no neurological disturbance was present and the disease process referable to an inflammation of the uveal tract.

Patient 4 is a 15-year-old school boy who presented with an eight month history of uveitis in the right eye. He had previously been treated with local and systemic steroids. The physical findings were limited to the

ocular examination. Visual acuity in the right eye was 20/200 and in the left eye was 20/30. The right pupil was completely bound down by posterior synechiae. Examination of the anterior chamber showed +1 cells. The vitreous was turbid due to cellular debris; the optic nerve head was edematous. The engorged central retinal veins collapsed easily on pressure. Minimal edema of the macular area was noted. The retinal periphery could not be well visualized due to the small pupillary aperture. The findings on lumbar puncture were unremarkable. The left fundus was normal. Central visual field examination demonstrated a central scotoma to a 2 mm red test object on the right. The diagnosis of papillitis associated with uveitis was made.

Patient 5 is a 30-year-old mechanic who presented with intermittent blurring of vision in the right eye. He had a previous episode of visual loss in the left eye 18 months previously, with a residual scotoma.

The findings were limited to the ocular examination. The vision in the right eye was 20/20 and in the left eye 20/30. The media of the right eye were clear. The disc was moderately edematous and neovascularization on its surface was noted. The retinal veins were dilated and there was peripapillary edema which extended to include the macula forming a macular scar (Fig. 2). The left eye was free of active inflammation, but a hyperpigmented chorioretinal scar was observed in the paramacular area (Fig. 3). The visual field examination revealed blurring of the nasal portions on the right and a ceco-central scotoma on the left.

Physical and neurological examinations were normal as were the usual blood tests including the serum electrophoresis, but the toxoplasma dye titer was 1:16. Treatment with prednisone orally was associated with a resolution of the edema and the disappearance of the visual field defect over the course of six months.

In one patient, pseudo-papillitis was most likely on an arteriosclerotic basis.

Patient 6 is a 60-year-old male who noted decreased vision in the left eye for six weeks. No other symptoms were reported. Vision in the right eye was 20/20 and in the left eye was slightly reduced to 20/25. A marked swelling of the left optic nerve head was demonstrated, limited to the nasal portion. There were no hemorrhages or exudates, though a marked distention of the superior retinal veins was noted. The inferior temporal

portion of the optic disc appeared slightly pale. A paracentral scotoma was demonstrated on left visual field examination. Ophthalmic examination revealed the right eye to be intact. Neurological examination was non-contributory. On treatment with methylprednisolone, 4 mg t.i.d., there was stabilization of vision at the prior level with some resolution of the edema of the nerve head and decrease in the paracentral scotoma over a period of six months.

The presumptive diagnosis of multiple sclerosis was made in two patients:

Patient 7 is a 16-year-old male who presented with a history of sudden onset of blurred vision in the right eye six weeks previously. Visual acuity on the right was 20/60 +2 and 20/20 on the left. The right disc was elevated about 1 diopter. Neovascularization at the disc margin was present with marked venous engorgement and indentation at arterio-venous crossings. Early blurring of the optic disc margin with prominent venous engorgement was noted on the left. Initially the diagnosis of papilledema was made. Visual field examination demonstrated a central scotoma in each eye. Neurological examination revealed a sustained nystagmus to lateral gaze in both directions, and the abdominal reflexes were absent bilaterally. The remainder of the physical examination was unremarkable. The protein content of the spinal fluid was 53 mg%.

Over the ensuing two weeks a marked improvement in visual acuity with resolution of the venous engorgement on the right was followed by optic atrophy. A similar course of events ensued in the left eye with some delay. The concurrence of papillitis, nystagmus and the absence of abdominal reflexes led to the impression that the disease process represented a manifestation of multiple sclerosis.

Patient 8 is a 35-year-old female of Greek descent who is known to have thalassemia minor and had been maintained on anticoagulants, because of a previous thrombophlebitis of the lower right extremity. She presented with the complaint of a dull pain over the left brow of 10 days duration and gradual loss of vision to light perception in the left eye over a three day period; in the right eye vision was 20/20. A mild elevation of the optic disc margins was noted on the left with marked venous distention (Fig. 4). Visual field examination showed a dense ceco-central

scotoma with a 15 mm white object at 1 meter. Deep tendon reflexes were slightly exaggerated in the right extremities. A past history of vertigo was ascribed to an acute viral labyrinthitis.

On treatment with systemic corticosteroids over a course of six weeks, vision was improved slightly to counting fingers at six feet with a concurrent decrease in the visual field defect, while the papillitis has remained unchanged. There is no known association between the thalassemia minor and the papillitis. It is likely that the ocular disturbance and the transient labyrinthitis represent manifestations of a more disseminated demyelination.

The next patient illustrates the possible confusion in the differentiation of papillitis from papilledema.

Patient 9 is a 23-year-old male who presented with intermittent fading vision in both eyes for three months. There was no history

of headache. Visual acuity in each eye varied from 20/30 to 20/80. Each optic disc was markedly edematous with elevation of the vessels at its margin. Neovascularization was seen on the face of the disc along with minute hemorrhages (Fig. 5). The veins were moderately distended but easily compressible on digital pressure. Visual field examination revealed enlargement of the blind spot bilaterally. The neurological and physical examination were completely within normal limits. X-ray examinations of the skull demonstrated questionable erosion of the posterior clinoids. An avascular mass displacing the carotid artery anteriorly and the anterior choroidal artery inferiorly with displacement of mid-line vessels to the left was detected on angiography. The spinal fluid protein content was 151 mg%. At craniotomy a large, presumably congenital, arachnoidal cyst was drained and excised from the right temporal lobe. There

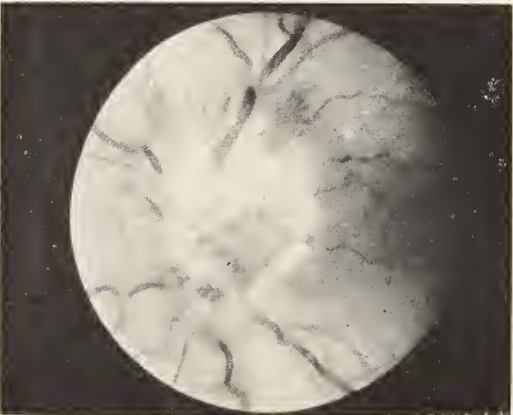


Fig. 5. (Frenkel) Photograph of the fundus of patient 9 demonstrating marked edema of the nerve head, venous distention and peripapillary edema.

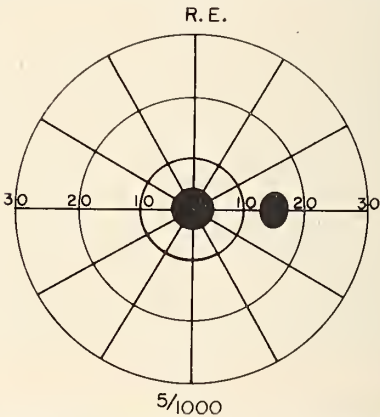


Fig. 6. (Frenkel) Tracing of central visual field illustrating a central scotoma.

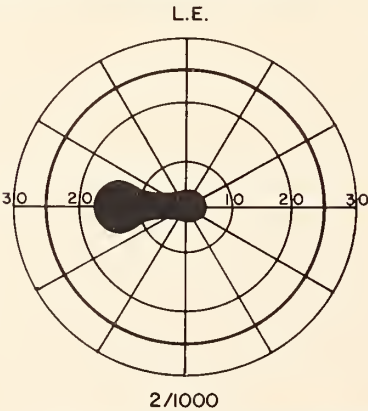


Fig. 7. (Frenkel) Tracing of central visual field illustrating a cecocentral scotoma.



Fig. 8. (Frenkel) Tracing of central visual field illustrating an arcuate scotoma.

was subsequent resolution of the papilledema, return of vision to 20/20 and disappearance of the blind spot enlargement.

Discussion

Classically, papillitis presents as a rather sudden and severe visual loss in one eye, evolving over a period of several hours to several days. Form and occasionally light perception may be lost. On ophthalmoscopic examination there is a moderate edema of the disc margin. Frequently a mild edema of the peripapillary retina may extend to the macula forming a "macular star" due to edema of the inner retinal layers (Fig. 1). The normal indentation of the optic cup is absent as a result of edema within the nerve head. The disc appears to be pinker than normal due to dilatation and new formation of small vessels on the optic nerve head, secondary to obstruction to venous flow resulting from swelling within the nerve. The retinal veins are distended and occasionally perivenous inflammatory reactions may give the appearance of vascular sheathing. Peripapillary hemorrhages are not uncommon. Often the normal spontaneous pulsations of the central vein are maintained. As a rule it is possible to compress the central retinal veins by external digital pressure upon the globe indicating that the intracranial pressure is normal. This test is not infallible since one can occasionally induce the collapse of these vessels in the face of high intracranial pressure (Patient 8). A central (Fig. 6) or ceco-central (Fig. 7) visual field defect is demonstrable on central visual field testing. Stereocampimetry may be useful in the face of very subtle defects.

As a rule papillitis is unilateral while papilledema is usually bilateral (Table I). The greatest diagnostic difficulty arises in the presence of bilateral papillitis. The single most important diagnostic point is the early and severe visual loss in papillitis combined with a central scotoma.¹ In contrast, vision is spared until late in the course of papilledema when it is usually associated with optic atrophy. Enlargement of the blind spot is the early field defect accompanying papilledema.

Neovascularization within the nerve head is usually more prominent with papillitis than it is with papilledema. Considerable confusion on ophthalmoscopic examination can occur since new blood vessels may form in long-standing papilledema. In our Patient 9, marked edema of the nerve head with new blood vessel formation gave the impression of a papillitis. However, near normal visual acuity, bilaterality of the process, the finding of an enlarged blind spot, lack of compressibility of central retinal veins all pointed to a papilledema which was indeed related to a huge intracerebral cyst. The converse situation can occur where a flagrant edema of both nerve heads in papillitis may be interpreted as signifying an increase in intracranial pressure.

Rarely papilledema will manifest in one eye and present a diagnostic problem. An associated proptosis or extraocular muscle palsy will indicate a retrobulbar tumor, often within the muscle cone, which is obstructing the venous outflow from the globe. Unilateral papilledema as a manifestation of a rare meningioma of the olfactory groove (Foster-Kennedy syndrome) will be associated with atrophy of the fellow optic disc. The prominent retinal hemorrhages in central retinal vein occlusion will usually differentiate this entity from a simple papilledema and from a papillitis. Associated inflammatory signs and resultant neurologic defects will indicate the presence of a cavernous sinus thrombosis.

Papillitis may be associated with inflammation of the choroid, retina, iris or ciliary body. The ocular reaction may include an exudative chorioretinitis and effusion of cells from the ciliary body. The latter may create turbidity of the vitreous of an intensity which may render ophthalmoscopic examination difficult (Patient 3). When an anterior uveitis is present the formation of adhesions between the pupillary border of the iris and the lens may produce synechiae (Patient 4). Rarely a cyclitic membrane can occlude the pupil. In difficult diagnostic situations the differentiation of papillitis

from papilledema may be aided by finding a cellular reaction in the vitreous which, in a subtle form, may require examination with a slit lamp biomicroscope using the Goldmann or Hruby lens. Also chorioretinal atrophy or pigment deposits in the involved or the fellow eye (Fig. 3) may indicate an inflammatory process, while a peripheral retinitis and cyclitis is frequently found in children (Patient 3).² As a rule, when papillitis is associated with generalized uveitis the onset of visual loss is more gradual, and may again range from a mild to a severe deficit. Among the varieties of chorioretinitis these may be due to toxoplasmic, luetic and tubercular involvement of the optic nerve head by contiguity.

In the majority of the cases of papillitis the nerve lesion is isolated and unassociated with any concurrent or subsequent neuro-ophthalmic disturbance. However, papillitis occurring in the course of systemic diseases is well documented. Papillitis may be seen following infectious fevers. Our second patient illustrates the concurrence of the signs of papillitis with a very massive edema of the macula with the onset of an acute urinary tract infection. Resolution of the edema was seen together with a marked improvement in visual acuity. Optic atrophy was, however, subsequently observed.

Infrequently, papillitis occurs in the course of acute suppurative disorders such as acute meningococcal meningitis or chronic granulomatous involvement of the meninges with tuberculosis or fungi. A perineuritis results from extension of the inflammatory process from the leptomeninges of the brain onto the meningeal coverings of the optic nerves. Rarely in this era of antibiotic therapy an acute inflammation in the nasal sinuses may spread to the orbit and involve the optic nerve. These disorders principally affect the peripheral nerve bundles, causing a peripheral constriction in visual field. In contrast, deficiency, degenerative and toxic entities and multiple sclerosis cause a more selective involvement of the inner fascicles of the

optic nerve resulting in loss of vision with a central scotoma.

Papillitis in the course of multiple sclerosis is uncommon and represents an inflammatory reaction in the visible portion of the optic nerve as contrasted to the more usual incidence of retrobulbar neuritis in this condition (Patients 7 and 8). Benedict,³ and Schlossman and Phillips,⁴ each found that only 10% of patients with multiple sclerosis or those who have eventually developed signs of multiple sclerosis presented with swollen discs. Low grade bilateral edema of the disc is seen in many cases of neuromyelitis optica (Patient 10) and in encephalitis periaxialis diffusa (Schilder's disease).

In multiple sclerosis, pathological studies show an early intense demyelination while destruction of axones, is relatively less. Degenerative changes in oligodendroglia are seen. Microglial and astrocytic proliferation ensues. The perivascular distribution of neural lesions is characteristic. A cuff of chronic inflammatory cells is frequently observed surrounding blood vessels. In neuromyelitis optica (Devic's disease), the demyelination is still more intense with greater destruction of axons and grey matter. With developing optic atrophy the reparative process following papillitis includes proliferation of glial and connective tissues giving the nerve head a flattened, whitish appearance with loss of the physiologic cup and intrinsic nutrient vessels.

A new entity to define the pathogenesis of puzzling instances of papillitis has been proposed. Pseudo-papillitis in middle aged and elderly patients has been ascribed by François and co-workers⁵ to ischemia of the nutrient artery of the optic nerve on an arteriosclerotic basis. In this condition a unilateral loss of vision of a fairly acute onset occurs. Vision, however, may be normal while a visual field defect prompts the patient to seek consultation. During the early phase of ischemia, edema of the nerve head may be prominent. The central retinal artery and its branches may appear attenuated while the veins are engorged. The significant diagnostic point is the

demonstration of an arcuate scotoma on visual field testing (Fig. 8). The latter is due to the interruption of optic nerve fibers which maintain an arcuate pattern up to the optic chiasm as demonstrated by Hoyt.⁶ As a rule the edematous phase of this process is short-lived and is followed by optic atrophy with pallor of the nerve head (Patient 6). Indeed, this is the usual presentation on clinical examination. Ophthalmodynamometry is rarely of diagnostic value since the pressure in the central retinal artery can be normal while that in the intrinsic vasculature of the optic nerve may be reduced.

Some controversy has arisen regarding the pathogenesis of pseudo-papillitis based on anatomic considerations. François and co-workers⁷ believe that about one-third of humans possess an intrinsic artery supplying the optic nerve arising as a distinct branch from the ophthalmic artery and separate from the central retinal artery. Progressive or sudden occlusion of this vessel might account for loss of vision followed by optic atrophy in arteriosclerotic patients who otherwise manifest fairly normal central retinal arteries and equal ophthalmodynamometry readings. However, Singh Hayreh⁸ feels that only a small percentage of optic nerves present such a distinct vascular supply while most derive nutrition from branches of the central retinal artery.

The differential diagnosis of a pseudo-papillitis on an arteriosclerotic basis requires the exclusion of inflammatory vascular disease. The most common of these is temporal arteritis where an inflammatory process affecting the vasculature of the optic nerve may be seen in association with a more diffuse angiitis. In the overt syndrome of temporal arteritis the visual disturbance is associated with pain in the temples, tender, palpable nodules along the course of the temporal artery, and a migrating polyarthralgia and polymyositis. The majority of patients are above 70 years of age. The sedimentation rate is elevated. Diagnosis is established by the demonstration of giant-cell arteritis on biopsy of the

temporal artery or lymphocytic vasculitis on muscle biopsy. Instances of occult temporal arteritis are being reported more frequently without associated systemic vasculitis.

Atrophy of the optic nerve with pallor of the disc is the usual clinical presentation of an advanced case of temporal arteritis; yet, edema of the disc may occur transiently during an early congestive phase of ischemia. Wagener and Hollenhorst⁹ have noted edema of the nerve head in 59 of 64 eyes during the first 10 days of symptoms attributed to temporal arteritis. In many instances of this disorder, no ophthalmoscopic signs are demonstrable. In a series of 40 patients, Meadows¹⁰ found signs of retinal ischemia in only three instances. Ophthalmoplegia is uncommon.

While the value of corticosteroid therapy in overt temporal arteritis is generally accepted, the role of such hormones in limiting the inflammatory and edematous components of a papillitis remains in doubt. In the majority of instances of isolated or idiopathic papillitis, e.g. those usually ascribed to a demyelination, the inflammatory process runs a course of two-six weeks with some recovery of vision being the rule. Indeed, return of vision to 20/20 and the disappearance of a previous central scotoma is not uncommon, with little or no evidence of optic atrophy. In most cases, however, some degree of optic atrophy is evident with a continued and sometimes severe visual defect persisting, accompanied by a central scotoma. Clinical and statistical studies are needed to establish the value of these agents, yet in the absence of systemic contraindication, prescription of corticosteroids allows the patient and the physician to weather the acute course of the inflammatory process.

When related to an ocular or systemic involvement the papillitis may follow the course of the underlying disorder. Often the damage to the optic nerve has been of such severity that functional recovery does not follow resolution of the inflammation and atrophy results.

In the presence of a uveitis, the treat-

ment of the papillitis is directed, when possible, to the underlying inflammation. In the rare instance of chorioretinal tuberculosis, isoniazid and para-amino-salicylic acid are prescribed. Penicillin is used in the case of a luetic involvement. The anti-malarial, Daraprim together with sulfonamides has been thought helpful in toxoplasmic uveitis. In the large group of uveitis for which no specific diagnosis is currently available, systemic corticosteroids are frequently beneficial, though in most instances it is likely that the inflammation follows its natural course unaffected by such treatment.

Summary

The differentiation of papillitis from papilledema can usually be made on the grounds of the clinical examination. A variety of systemic and ocular conditions may occur in conjunction with papillitis though the majority represent an isolated inflammatory process.

The treatment of papillitis is directed at any underlying disorder for which specific therapy is available. In the absence of such specificity, corticosteroids are generally used, though their effect on a disease which is often of a remitting or self limited character, has not been statistically determined.

Table I

Clinical Differentiation of Papillitis from Papilledema		
Symptoms and Signs	Papillitis	Papilledema
Visual loss	Sudden, early profound May precede ophthalmoscopic changes	Gradual, late, follows long standing edema
Field changes	Central scotoma pronounced for red	Concentric regular contraction of peripheral fields Enlargement of blind spot
Edema of nerve head	Rarely above 2 diopters	Frequently above 2 diopters
Venous engorgement	Mild to moderate	Marked
Compressibility of retinal veins	Compressible	Usually non-compressible
Retinal and peripapillary hemorrhages	Few	Many
Posterior vitreous haze	Common	Not clinically observed
Course	Acute onset, clearing of inflammation in several weeks; postinflammatory optic atrophy usual with some reduction in vision	Gradual onset, Progressive visual deterioration until etiologic cause relieved.

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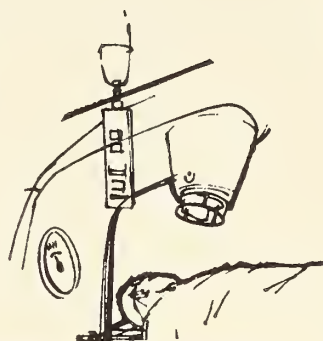
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Medical Progress

Harvey Kravitz, M.D./progress editor



PROGRESS IN ELECTRONIC CARDIOLOGY

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THE ELECTROCARDIOGRAM CAN TRULY be considered symbolic of Man's technical progress in the field of cardiology. This instrument has been the fundamental tool used in studies upon which vast areas of progress in cardiology have hinged. The electrical phenomena of cardiac function have commanded more attention than any other single aspect of cardiovascular research, and well they may, for on this system the tenuous thread of life vibrates.

The observation, measurement, and alteration of this electrical system has brought about a whole new discipline in cardiology which we might term "electronic cardiology." This is the subject of our present review.

Radio Electrocardiography

Recent advances in electronics have enabled us to observe the electrocardiogram under a variety of special circumstances. The most dramatic example of this is the monitoring of the electrocardiograms of our astronauts as they circled the earth. Under more mundane circumstances, the electrocardiogram has been observed during psychological stress, exercise, sleep, and

normal activity. Modern technology has made electrocardiography a much more dynamic study through a number of advances.

Electrical data picked up from the chest wall can be transmitted by a light weight compact radio transmitter that is little larger than a package of cigarettes. This data can be fed into a conventional recorder, an oscilloscope, or to a tape recorder. The latter affords a file of data that can be analyzed at a later time. Tape recording systems have been developed that are light weight and can function continuously for 10 hours. Study of these radio electrocardiograms taken during many varied activities have contributed greatly to our general knowledge of cardiac function. Special oscilloscopes and computer systems have been used to advantage to analyze these long records.

The incidence of arrhythmias occurring occasionally in normal, and to a surprising degree in pathologic states (especially in arteriosclerotic heart disease), really represents a revelation. A study by Semler, Norland, and Gustafson of the radio electrocardiogram recorded on tape for 10-hour periods revealed 37 paroxysmal arrhythmias in 253 subjects. All types of arrhythmias were noted, including a ventricular tachycardia of 35 seconds' dura-

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tion in an otherwise normal 16-year-old who was studying for an examination in physics. (Given the subject matter facing the boy, this did not strike me as unusual.) Six of their patients had atypical chest pain, and the radio electrocardiogram helped to make a diagnosis of atypical angina when the pain was noted to be associated with definite S T changes. In another group of patients, pain suggestive of angina was felt to be due to diaphragmatic hernias when it was found on long observation that the radio electrocardiogram remained normal during periods of distress. The radio electrocardiogram has also been useful in monitoring the electrocardiogram response serially during early mobilization after an infarct.

Other long term studies have been carried out with the Holter monitor: a four-pound electrocardiorecorder carried with a shoulder strap or on a waist band. This tape recorder is connected to chest electrodes, and records the electrocardiogram for up to 10 hours while the patient engages in normal activity. The entire 10-hour tape can be studied and analyzed in a 10-minute interval by the electrocardioscanner computer. Corday et al., report that their studies revealed that at least 50% of people with arrhythmias are unaware of them. Rapid and irregular arrhythmias produce a precipitous drop in cardiac output and blood pressure. If a local vascular bed is compromised by atheromata, a usually innocuous arrhythmia may elicit focal ischemic signs and symptoms. The patient may present to the physician with neurological manifestations such as hemiparesis and dizziness, or with symptoms of coronary insufficiency manifested as angina or dyspnea. The remote symptoms may be the only clinical clue of an occult cardiac irregularity. The radio electrocardiogram and the Holter units now offer us a tool that will help us prevent these occurrences because of more precise diagnoses.

As Corday points out, "This apparatus augments the range of physiological observation over prolonged periods of time in the very environment which induces symp-

tomatology. Previously uncontrolled variables are now brought into scientific consideration and a constant permanent recording of environmental cardiovascular pathophysiology is made available for clinical study." We can look forward to excellent studies of electrocardiogram function during certain types of surgery, during labor and delivery. The efficacy of drugs, especially long acting dilators in arteriosclerotic heart disease, and the effect of anti-arrhythmic therapy will be further defined.

The radio electrocardiogram with the tape recording system now affords industry a method of evaluating the risk involved in having certain individuals in sensitive positions. A study of airline pilots, train engineers, bus drivers, etc., may detect potential risks.

I must note a word of caution regarding interpretation. S T and T wave changes on the radio electrocardiogram may be misleading. Lachman et al., point out that in their study there were a significant number of individuals who showed changes suggestive of myocardial ischemia with change of position only. Thirty-two patients had depressed S T segments and inverted T waves within 30 seconds to three minutes after changing from supine to upright positions. Fourteen returned to isoelectric level during exercise. In 18, changes persisted during exercise and looked like ischemia, but returned to normal on assuming the supine position. Many authors have noted orthostatic S T and T effects—especially on using the radio electrocardiogram. Electrode position may help to minimize these findings.

Conventional Electrocardiogram Monitors

The conventional monitoring of electrocardiograms has become an everyday occurrence in most large hospitals with systems that present the electrocardiogram on an oscilloscope screen for instantaneous and constant observation. Present day monitors have a rate meter and alarm systems that give a visual and audible alarm at the bedside and often at a central station. The alarm sound is triggered by a rate that exceeds or is less than pre-set figures. The

limits can be varied in each case. The sound is more alarming when the rate drops, since this in general presages a more serious arrhythmia. The instantaneous availability of this information has resulted in improvement in the mortality statistics (in patients with acute myocardial infarction), and there is now evolving the concept of the coronary care unit, where all individuals with an acute coronary can be monitored constantly. The incidence of arrhythmias in these cases has been found to be extremely high, and as yet there are no clear indicators as to which patients may escape this complication of acute infarction. For the present, it would seem prudent to monitor all patients with acute myocardial infarctions for at least seventy-two hours. Certainly those patients with shock, failure, or an episode of arrhythmia demand this protection. The duration of monitoring is still a controversial point. A recent study showed that 15 of 16 patients with an acute infarct had an arrhythmia when monitored for three weeks. The ventricular arrhythmias (ventricular tachycardia, 25%) were heralded by ventricular ectopies, and atrial fibrillation (31%) was preceded by numerous atrial ectopies. The arrhythmias occurred anywhere from a few hours to 14 days after the onset.

Other studies indicate that most arrhythmias occur during the first few days. Spann et al., studied 30 acute infarcts and found 73% had an episode of arrhythmia. These were of ventricular origin in 50% of the cases. The highest incidence was in the first 24 hours. They found little correlation with severity or age, and digitalis was not a factor. These facts would indicate that all individuals with an infarct should be monitored.

The cardiac or electrocardiogram monitor comes as a mixed blessing as any coronary care or intensive care unit nurse will attest. False alarms are not infrequent, and I feel that as our experience grows we will insist that the manufacturers make the alarm sound less penetrating, albeit just as distinct. The audible sound with each heart beat may be reassuring to the doctor and

nurse. However, in some cases, it is a little too personal for the patient, and he finds himself anxiously counting the beats and literally waiting for the next one. Some difficulties have been encountered with skin irritation from the electrodes which are in place constantly. A number of improved electrodes have been developed, and placement of these on the trunk instead of the extremities has resulted in fewer problems with false alarms. Non-allergenic tape has also been of help in preventing skin problems.

Monitoring of cardiac function through electrocardiogram observation has become a routine practice in cardiac surgery; yet, it is rare to see it used routinely in general surgery. Apparently this is mainly a matter of custom, since it would seem to be of definite value in the instantaneous detection of cardiac arrest—a situation where seconds and minutes are of critical importance to avoid serious brain damage. Portable miniaturized battery-operated monitors are being developed that will easily fit on the anesthetist's cart. In this case, the audible sound triggered by each Q R S would seem to be of value—that is if the temperament of the surgeon would permit it. The seriously ill post-operative case should also be monitored, especially if there is a history of heart disease.

The concept of electronic monitoring of cardiac function has only begun to be used in clinical medicine. Certainly we can look forward to continued progress, and undoubtedly more meaningful parameters to monitor will be available, i.e., cardiac index, blood flow, myocardial contractility.

Electric Therapy

The most dramatic development in recent advances in cardiology has been the adaptation of electrical systems that are capable of converting various arrhythmias to normal sinus rhythm. With few exceptions in the past, electric alternating current shock therapy was used only as an emergency procedure in patients with ventricular fibrillation. Most physicians are little for its use because of the marked muscular contraction precipitated in the patient and

because, in general, they were unfamiliar with the technique and equipment. They were afraid to use it except in dire emergency situations. A much different story surrounds the direct current defibrillators. Direct current shock therapy has given us a tool that is safe, efficient, and causes no myocardial damage. With this procedure, larger amounts of electric current are introduced into the body across the myocardium for a much shorter interval than had been used with the older alternating current units. This "electric bullet," as it has been termed by the lay press, causes depolarization of the entire myocardium and allows the normal sinus mechanism to reassert itself unchallenged by ectopic foci. The general body muscular contraction, in most cases, is little more than a jerk of the shoulders resembling a quick shrug. The patient experiences little pain, so that the procedure can be used if necessary in an emergency on a conscious patient with only analgesia. The usual elective use of this technique, however, is carried out with analgesia and under induced sleep with a rapid acting anesthetic agent. The speed with which a deadly arrhythmia is subdued—as with the crack of a whip—makes this truly one of the most dramatic treatment methods in modern medicine.

Direct current shock therapy has seen its greatest use in the conversion of atrial fibrillation and flutter to a normal sinus rhythm. In these instances, as with ventricular tachycardia, the shock is programmed to fall on the R spike of the electrocardiogram—a time when there is little or no danger of causing ventricular fibrillation. The atrial and nodal tachycardias rarely require this method of treatment, since they respond so readily to sedation and usual drug therapy. If, however, the patient's life is threatened because of inefficient heart action caused by the rapid rate, direct current cardioversion offers the quickest, safest, and most efficient method of establishing sinus rhythm.

As with any new method of treatment, our enthusiasm for its use is tempered by experience. Electro shock cardiae therapy

has been found to be hazardous in patients with evidence of digitalis excess, and fatal ventricular fibrillation has been induced with this method under these circumstances. It has been recommended that patients undergoing elective cardioversion be taken off digitalis for a few days prior to treatment, and if this is not possible, supplementary potassium chloride should be given for a few days prior to the procedure.

In the conversion of long-standing arrhythmias, permanent conversion of atrial fibrillation and atrial flutter occurs in only 42% to 56% of the cases. In those that fibrillate again, a second shock has not been found to have any more permanent effect, so repeat procedures are not recommended. In those that do convert, it is important to continue quinidine therapy to suppress the development of further ectopic foci. There is no agreement as to whether these patients should be on anti-coagulant therapy. A number of series have been carried out without this precautionary measure with no reported episodes of embolic phenomena from the change in rhythm.

Doctor Zoll has used a synchronized alternating current defibrillator in the same manner as the direct current equipment, and reports that both methods are effective, safe, and accompanied by little or no side effects. He has demonstrated in animal work that no myocardial damage ensues even after 300 shocks. It is doubtful that the present direct current converters will be replaced by a swing back to the alternating current equipment. In fact, the studies of Yarbrough et al., showed significant difference favoring direct current shock group with regard to the maximum rate of pressure development in the left ventricle and in the development of isometric tension. These measures appeared to have changed significantly after alternating current shock but not after direct current. Widening slurring and decreased voltage seen after alternating current were not noted after direct current, and S T and T changes noted after both methods were more marked with alternating current.

It may be that the danger of producing

ventricular fibrillation with asynchronous direct current fibrillation has been over-emphasized. Gordon et al., have used a non-synchronized defibrillator (acceptable d-c unit which has a monophasic wave with a rounded contour at a setting between 900 and 1800 volts, 3—10 m.sec., 100—200 watt/sec.) in treatment of 80 cases without any episode of ventricular fibrillation. It would seem however, that the added safety in using a synchronized shock should be valued, since the above study is small and hardly proves any point regarding the necessity of synchronization. There is no doubt that direct current shock has caused ventricular fibrillation when given asynchronously. The risk may be small, but it is still present.

One limiting factor in the use of cardioversion is the need for light anesthesia. Perhaps cardioversion could be used with heavy analgesia with narcotics; however, general experience dictates against such an approach. McNally et al., have placed one of the electrodes in the esophagus in order to get a more direct flow of current through the heart, and limit the current to other tissues. They report that with this modification less current is needed, and there was distinctly less skeletal muscle contraction. The introduction of an esophageal electrode is hardly an improvement, since we would seem to be trading one discomfort for another. Is it worth it to eliminate the inherent risk in anesthesia? We will have to wait further evaluation of this method. When more acceptable techniques are developed, I am sure that cardioversion will be the method of choice for the conversion of all rapid arrhythmias, except, perhaps, the ones caused by digitalis.

Pacemakers

Control of the cardiac rhythm has been extended by the magic of electricity to yet another area of cardiac pathology. We have seen the development of electronic equipment that is capable of delivering small electrical currents able to cause effective cardiac muscular contraction followed by normal re-polarization and repeated re-

sponse to this current. A faulty natural pacemaker in the heart can be by-passed. The treacherous problem of complete heart block with its triple life threat of ventricular fibrillation, ventricular tachycardia, and cardiac standstill can now be controlled. At first, external pacemakers were used and were brought to a high degree of sophistication with electronic circuitry that would allow external pacing only when the normal pacemaker was suppressed. If the natural rhythm became established, the pacemaker would phase out, but would remain on stand-by in case of repeated failure of the normal pacemaker. The major drawback to this method was the need for continuous hospitalization because of the size of the equipment. There was also some discomfort from the current passing through the skin and, of course, care was needed in the selection of the optimum rate and current amplitude.

The external pacemakers have been supplanted, except in emergency situations, by a number of remarkable battery-operated pacemakers that are small enough to be implanted in the body in the abdominal or chest wall. Wires leading to the myocardium carry the minute current necessary for cardiac pacing. The power is supplied by small batteries that have a life span of over three years. The pacemaker has controls that can be manipulated through the skin to increase the rate of pacing or the amplitude of current delivered.

As techniques of pacemaker implantation have developed, the hazard of cardiac arrest during surgery for implanting the unit posed a serious problem. This was circumvented by the development of the pacing catheter. Prior to surgery, a pacing catheter is introduced into the right ventricle via the venous circulation from the arm or neck and left in place. The current for this is supplied by a small battery-operated pacemaker that is attached to electrodes of the catheter. The rate and amplitude of current are modified to ensure efficient cardiac action during the pre-operative period. In some instance when a thoracotomy cannot be carried out, the pacing catheter is

left in place and the electrodes attached to a conventional implantable pacemaker that is placed under the skin of the chest wall. Pacing catheters have been left in place for long periods without apparent ill effect. Seymour et al., reported on 87 cases with trans venous pacing via a right ventricle catheter. Four of their cases were paced in this manner for over three years, and one for over four years. At present they feel that the indications for trans venous pacing are for the initial management of the critically ill patient, and in heart block complicating acute myocardial infarction; for absolute control during surgery; for management of periods of implant failure; for the patient who cannot or will not undergo surgical implantation.

Transvenous pacing has been complicated by right ventricle perforation. Fort reported two cases, both of which were asymptomatic and were repaired without difficulty. He recommends that in order to avoid this, the catheter tip should be placed in the relatively thicker out-flow tract of the right ventricle.

Frequent chest x-rays should be obtained to insure that the catheter remains in place, and early thoracotomy with permanent electrode implantation should be carried out.

When the heart block is intermittent and we have a natural or sinus pacemaker that competes with the implanted pacemaker, or at times a ventricular focus, we may see episodes of serious ventricular arrhythmia due to the electric stimulus falling during the myocardial vulnerable period. Because of this problem, more sophisticated pacemakers have been developed that fire the ventricle on signal from the atria or sinus node and will fire automatically if there is sinus arrest. With this type of pacemaker we no longer have a fixed rate and the cardiac response to stress, exertion, etc., is more normal. This is an important factor, but not a crucial one, for it has been found that a fixed pacemaker rate does not necessarily mean a fixed output. The cardiac output varies according to bodily needs—mainly by an increase in the stroke volume.

A dual rate pacemaker has been developed which is, in effect, a two-pacemaker unit—each with a different rate and a magnetic switching device. This provides a rate choice for various physiologic needs, and a “spare” in the event of the failure of one unit.

A unique application of electric pacing has been reported by Lilleher. He obtained excellent filling of the coronary arteries during coronary angiography with three to five seconds of pacing at 10 to 20 beats higher than resting rate. This caused systolic hypotension which retarded the washing away of blood from the root of the aorta. The diastolic pressure was maintained and allowed good perfusion of the arterial tree.

Paired pacing is a relatively new technique for slowing the rapidly beating heart rate and augmenting cardiac output. With this method, two electrical impulses are delivered to the heart. The interval between stimuli is such that the first causes muscular contraction and the second causes only electrical depolarization. This provides a slower rate with a longer filling period and a longer period for the recharging of the contractile system of the myocardium and consequent increase in the contractile force. The clinical applications of this method are not clear as yet.

Conclusion

The remarkable progress in the last few years in the field of cardiology rests squarely on the foundation of electronics, and the future of investigation and therapy in this field is truly bright. The recent use of telemetry to monitor the blood pressure in a giraffe and the use of electronic stimulation of the carotid sinus synchronous with ventricular systole to cause a reduction in blood pressure are examples of some other areas of investigation that may soon have human application.

I am sure that we are seeing only a spark of the beginning in the application of our present day technology to the field of medicine. And cardiology, of all the medical specialties, has made the transition into the electronic age with the greatest of ease.

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ISMS Refuses to Extend Contract for Military Dependents' Medical Care

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REFUSAL BY THE ILLINOIS STATE MEDICAL SOCIETY to extend its contract with the Office for Military Dependents' Medical Care beyond Oct. 31, 1966, emphasizes ISMS's determination to secure payment of "usual and customary fees" for physicians' services to beneficiaries of government assistance programs.

The following questions and answers are presented to inform ISMS members on the Society's "usual and customary" fees program, the reasons behind it, and the progress being made toward gaining its acceptance by government agencies.

What is the philosophy behind the ISMS demand for payment of "usual and customary" fees?

Two basic factors shape the ISMS philosophy. One involves the matter of need; the other relates to the unfairness of double taxation. In the depression of the 1930's, physicians were acutely aware that many people could not afford to pay for medical care. As a result, they provided needed care without regard to the patient's ability to pay.

In many instances, physicians were never paid, while in other instances they accepted sub-standard fees from government welfare agencies. In the intervening years, government medical assistance programs changed in character, gradually eliminating the element of need as a condition of eligibility.

The only aspect of the program that has remained the same are the sub-standard fees paid to physicians.

ISMS believes that, since the need factor has been eliminated from government medical programs, physicians should not be expected to subsidize the programs. Physicians, in fact, are already supporting these programs through increased taxes. ISMS believes that to pay less than "usual and customary" fees represents a form of double taxation upon the physician.

By what authority has ISMS taken its position on "usual and customary" fees?

At its 1966 Annual Meeting, the ISMS House of Delegates—upon recommendation of the Committee on Usual and Customary Fees—adopted as official policy a recommendation "That 100 percent of the usual

and customary fees be used as the basis for negotiations with all governmental and private agencies."

The House added that "when a government agency refuses to accept the usual and customary fee concept and the plan for review . . . the society (should) withdraw its support of the program and so notify its members that participation by them would be on an individual voluntary basis."

What is a "usual," "customary," and "reasonable" fee?

The House of Delegates adopted these definitions: The "usual" fee is that fee usually charged for a given service, by an individual physician to his private patient.

A fee is "customary" when it is within the range of usual fees charged by physicians of similar training and experience, for the same service within the same specific and limited geographical areas (socio-economic area of a metropolitan area or county).

A fee is "reasonable" when it meets the first two criteria, or in the opinion of the responsible local or district and state medical society review committee, is justifiable, considering the special circumstances of the particular case in question.

Just what are the responsibilities of the Committee on Usual and Customary Fees?

The committee was appointed by the Board of Trustees to define the concepts of usual, customary and reasonable fees, and to develop guidelines for the implementation of these concepts at the county, district and state society level. In addition, the committee meets with representatives of health insurance carriers, government intermediaries and government agencies who pay for medical services to advance the ISMS position on physician reimbursement.

What happens if a carrier or agency tells a physician his fee is unusual or unreasonable?

Procedures in such cases have been outlined by the committee in a set of guidelines accepted by the ISMS Board of Trustees.

The guidelines state that, initially, the two parties should attempt to resolve the difference between themselves.

If they don't succeed, the matter is referred to ISMS, which will forward the case to the appropriate county medical society for review.

Is the decision by the county society review committee binding upon both the physician and the carrier?

The guidelines state that both parties are expected to accept the recommendations of the county review committee. However, they have the right of appeal to a district review committee and to the ISMS Prepayment Plans and Organizations Committee when necessary.

Why did ISMS not renew its contract with the Office for Military Dependents' Medical Care?

This government program—which provides medical services to military dependents and others—has functioned under a schedule of allowances (sub-standard fee schedule) since its inception in 1956. That schedule had been reviewed and approved annually by ISMS. However, with adoption by the ISMS policy of reimbursement on a "usual and customary" fee basis, renewal of the contract was not possible unless the Office for Military Dependents' Medical Care agreed to pay "usual and customary" fees. The Office said it had to work under a fixed schedule of allowances. Consequently, the contract was not renewed.

Does this mean Illinois physicians are prohibited from participating in the program?

Not at all. Physicians are still free to participate on an individual, voluntary basis. Those who do should bill their usual and customary fee to the program's new fiscal agent at:

Mutual of Omaha Insurance Co.
Dependents' Medical Care
Box 1298
Omaha, Neb. 68101

What new benefits are available to eligible dependents of military personnel under the recent amendment to the Military Dependents' Medical Care Act?

Outpatient care benefits became available to the dependents on Oct. 1. This will be followed on Jan. 1 by an extension of inpatient services to provide coverage for all retired personnel, their dependents and handicapped children of military personnel on active duty. In the past, outpatient services have been limited generally to emergency care and perinatal care, but under the new amendments, services have been extended to include almost a complete range of outpatient care.

Will the Illinois Department of Public Aid reimburse physicians on the basis of 100 percent of usual and customary fees?

We hope so. This is expected to be determined by Jan. 1, 1967, through negotiations now in progress between Harold O. Swank, director of the Department of Public Aid, and the ISMS Committee on Usual and Customary Fees. Negotiations

are based upon the findings of the recent ISMS survey of usual and customary fees charged by Illinois physicians. Mr. Swank had expressed a willingness to consider 100 percent reimbursement, providing he was given sufficient information about usual and customary fees charged by Illinois physicians. ISMS satisfied this request with an intensive membership survey. Statistics accumulated from the survey—completed earlier this month—were summarized and provided to Mr. Swank.

Until negotiations are completed, will payments by the department remain at current levels?

Yes. The ISMS Board of Trustees, which views the current fee schedule as completely inadequate, has recommended that a proposed interim adjustment of the schedule be deferred until a firm commitment is secured in keeping with the definition of a usual and customary fee.

Processing 'Part B' Claims for Public Aid Recipients

In its continuing effort to keep physicians of Illinois informed about the ramifications of government medical program, the Illinois State Medical Society publishes the following statement from the Continental Casualty Co.

"The Continental Casualty Co., carrier for Part B of the State of Illinois, excluding the five northeastern counties, has been bombarded with questions concerning the processing of Part B claims of people over 65 who are on Illinois public aid and are eligible for Medicare Part B. The carrier wishes the membership of the ISMS to be advised that there has been no arrangement with the Department of Public Aid to provide for the payment of the deductible, or any sums under the \$50 of incurred medical cost.

"The claims of the beneficiaries who are under public aid will be processed by Continental as are all other Part B claims. The physician giving the service should indicate on Form 1490 (B beneficiaries form) the identification number of the public aid recipient; a copy of the Form 1490 should be sent to the Department of Public Aid in Springfield. Continental will then forward a copy of the explanation of benefits to the Department of Public Aid; this, when matched with the copy of Form 1490, will be the basis for payment from public aid.

"Again, it is reiterated that there has been no arrangement with the Department of Public Aid to pay any sums that fall below the \$50 deductible limit on public aid cases."



THE USE OF PERPHENAZINE SYRUP IN THE SEVERELY DISTURBED MENTALLY RETARDED CHILD

Sherman E. Kaplitz, M.D./chicago

IMPROVEMENT WITH PHENOTHIAZINE drugs has been reported among disturbed mentally retarded children.¹⁻⁹ Sprogis and colleagues, for example, noted that the psychiatric disturbance subsided in 23 of 25 patients with mental deficiency so that the patients no longer were managerial problems; the treatment was with perphenazine in doses no higher than 12 mg. three times daily.⁸ Most of the studies report about patients who are institutionalized. Rowley and colleagues, however, reported on patients who had been treated solely at home; improved behavior after treatment with chlorpromazine in 57 percent of the children (of whom 28 percent showed marked improvement) was reported by the group.⁹ There also have been studies indicating improvement among hyperactive emotionally disturbed children after treatment with phenothiazines.¹⁰⁻¹⁷ Eisenberg discussed the use of phenothiazines among

emotionally disturbed children, and concluded that these drugs have a useful although limited role in treatment.¹⁸

Many physicians, especially psychiatrists, feel that the disturbed behavior is due to an emotional or functional involvement caused by psychopathology in the family, and thus psychotherapy should be the treatment of choice rather than drugs that will only dull the child. Other physicians feel that drugs should be the primary treatment because they actually counteract the disturbed function on a physiological or chemical basis. Most recently there are a few who believe that the problem is due to organic dysfunction as well as to a functional overlay due to the former involvement. Thus, disturbed behavior can be caused by frustration in a brain-damaged child with aphasia or a learning problem. Although we are well aware this philosophical argument cannot be resolved in one study, we decided to evaluate the use of a psychopharmacologic drug, perphenazine (supplied as Trilafon by Schering Corporation, Union, New Jersey), in brain-damaged children.

Medical Director, the Dr. Julian D. Levinson Research Foundation; Associate Professor of Neurology, Chicago Medical School; Attending Neurologist, Cook County Hospital and Oak Forest Hospital.

TABLE 1

Etiology of Mental Retardation	
Etiology	Number of Patients
Cerebral dysgenesis or agenesis	7
Heredofamilial	6
Cerebral birth injury	4
Encephalitis and/or meningitis	4
Mongolism	2
Prematurity	1
Toxemia of pregnancy	1
Rh incompatibility	1
Maternal mumps during pregnancy	1
Brain abscess	1
TOTAL	28

Methods

The 28 children selected for this project were from the outpatient clinic of the Dr. Julian D. Levinson Research Foundation for Mentally Retarded Children. The patients were mentally retarded and revealed evidence of other organic brain disease otherwise known as "brain damage." They were selected because of very poor behavior such as hyperactivity, short attention span, destructiveness, marked aggressiveness, and insomnia. The patients selected for this study ranged in age from four to 17 years; the average was eight years. Psychological testing revealed intelligence quotients that varied from ten to 90; the average was 53. The diagnoses are summarized in Table 1.

The degree of behavior disturbance ranged from minimal to marked; 69 percent of the children had relatively mild problems. Hyperactivity was the most commonly observed symptom and occurred in most patients. Short attention span was noted in many patients, and some were very aggressive. Others had insomnia, and a few had destructive tendencies.

The drug used in this research project was a phenothiazine, perphenazine, with tranquilizing and antiemetic activity. Perphenazine was supplied in a liquid or syrup form in which the dosage was 2 mg. per 5 cc. (one teaspoon). The syrup was used since these children were severely disturbed and it was felt that they would more

TABLE 2

Results of Treatment with Perphenazine		
Result	Number	Percent
Marked improvement	11	39
Moderate improvement	6	21
Mild improvement	1	4
No improvement	6	22
Worse	4	14
TOTAL	28	100

readily accept the medication in this pleasant-tasting form. The daily dosage varied from 1 mg. to 4 mg. three to four times daily. A placebo was not used since it would be impractical in this study. No laboratory studies were done since the drug had been found quite safe in other studies.^{19,20}

Each patient was evaluated physically, neurologically, and psychiatrically prior to the study by members of the staff, with follow-up studies during and at the end of the project. Psychological testing was also done prior to the study but follow-up examinations were not done in all cases. The parent or parents were questioned regarding the behavior of the child at home and school. All other sedatives and tranquilizers were stopped except the anticonvulsants.

In this series, four of the children had a history of convulsions. Twelve of the patients had a recent electroencephalogram, and nine of these were considered normal. The three tracings that were abnormal showed spike discharges.

The children were rated at the end of the period on the basis of the staff observations plus the reports of the parents and schoolteachers. The rating categories were marked improvement, moderate improvement, mild improvement, no improvement, and worsening of behavior.

Results

Improved behavior was noted in 18 (64%) patients. Of these, 11 (61%) revealed marked improvement in behavior; six (33%) patients had moderate improvement; and one (6%) showed slight im-

provement. Ten (36%) patients had no improvement. Of these four became more agitated and hyperactive. In some of the cases with marked improvement, the children, according to their teachers, did much better in school due to improvement of their attention span and diminution of hyperactive behavior. Of the four children that became worse with the medication, three became more hyperactive (one also noted ataxia) and one child became "meaner." No significant toxic effect was observed clinically.

Discussion

Drug therapy definitely has a role in the treatment of the severely disturbed mentally retarded child with an associated emotional problem, with or without brain damage. In many cases it makes it possible

for these children to attend school or to participate in group activities. Perphenazine, other phenothiazines, and other tranquilizers should be tried in the treatment of these children. In our experience perphenazine has proved quite effective. In some cases higher doses might also be attempted, since toxic effects were not significant.

Summary

Perphenazine (Trilafon) Syrup, ranging in doses from 3 mg. to 12 mg. daily, was given to 28 severely disturbed mentally retarded brain-damaged children. Improved behavior was noted in 18 (64%) patients of whom 11 (61%) had marked improvement. Three patients became more hyperactive (one also became ataxic) and one became "meaner." Six patients had no improvement.

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ILLINOIS MEDICAL ASSISTANTS ASSOCIATION REPORT



THE INSTALLATION OF MRS. ELVERA FISCHER of Chicago as President of the American Association of Medical Assistants climaxed a week of activity at the 10th annual meeting recently in St. Louis, Mo. In a moving candlelight ceremony, she took the oath of office from Mrs. Ethel Haase, also of Chicago. Her installation was attended by 76 members from all of Illinois' 15 county societies—Adams, Cook, DeKalb, Du Page, Kane, Lake, McHenry, McLean, Peoria, Sangamon, St. Clair, Tazewell, Vermillion, Will-Grundy, and Winnebago—as well as more than 500 members from all over the United States. After the installation a program was presented by the Singing Doctors of Greene County, Mo.

Pre-convention activities included a tour of Grant's Farm, an evening on Goldenrod Showboat, a tour of St. Louis and a visit to the Shrine of Our Lady of the Snows at Belleville.

The convention included a two-day session of the House of Delegates, the policy making body of AAMA, and an additional three days of educational programs.

Wyeth Laboratories sponsored a symposium on "The Role of the Medical Assistant in Medicare and the Drug Abuse Laws," in four sections: 1) The Meaning of the Laws; 2) Medicare: First Contact the Medical Assistant; 3) The Drug Abuse Law and the Pharmaceutical Industry; and 4) The Drug Abuse Law: Compliance and the Physicians Office.

Hudson Speaks on Medicare

A luncheon honoring Charles L. Hudson, M.D., President of the AMA was held after

the symposium. He spoke of the implementation of Medicare during his first months in office. The past presidents of AAMA were also introduced and honored.

Workshops were also conducted on the following subjects:

- 1) Parliamentary Procedure & Protocol
- 2) Duties of Officers
- 3) Purposes and Goals of County, State and National Organizations.

Dr. Michael Drury, Traveling Fellow from Worcester, England, spoke on "Medical Assistants I Have Met Around the World." He outlined how the medical team is organized in England and the position of the medical assistant, and he described the training and duties of the medical assistant in Holland, Germany, Yugoslavia, Russia, and Canada.

Communications was the subject of two lectures. Jude West defined communication, outlined why and how we communicate, described the barriers to communications. He then laid down 10 commandments for good listening. West was followed by Rex Kenyon, M.D., whose subject was visual communications. He described how attention and interest is reflected in faces and eyes of patients.

Ruggeros Speak in McHenry

McHenry County Medical Assistants Association was host for the fourth annual professional symposium Sept. 18, at the McHenry Country Club. There were 84 registered in attendance.

The first speakers were Dr. and Mrs. S. L. Ruggero who had spent a month on the island of Tortue off the northern coast of

Haiti, bringing medical care to the natives. They went as representatives of AMDOC, an organization founded by two doctors in Texas who felt that doctors should do something on their own to bring medical help to people in need, instead of letting the government do it all. AMDOC arranges for volunteer doctors to serve in remote areas of the country where indigent people need their help. The doctors who volunteer must supply their own transportation and supplies.

The island of Tortue is about the size of our state of Vermont. Where the population density is 50 people per square mile in this country, on Tortue there are 300 people. The official language is French, but many messages are sent by Voodoo drums. Most of the people are Creole.

Dr. and Mrs. Ruggero took with them TB skin tests, antibiotics, vitamins, soap, and at the request of the island hospital—bedsheets. On their arrival they discovered that the bedsheets were wanted so that they could be torn into bandages “which we can wash and use again!” They found the most prevalent diseases to be intestinal parasites, tuberculosis, and malnutrition. The prevalence of intestinal parasites was so great that it was felt that the patient was doing good if his hemoglobin was as high as five grams.

The hospital on the island was small and run by six lay sisters. They had 10 years of service and were well trained. One of the sisters trained nurses, another was in charge of the pharmacy, a third was midwife and dentist, a fourth was in charge of the outpatient clinic. The hospital also had one doctor who was serving one year there. The cost of a medical consultation was one gourd, which is equivalent to 20 cents.

The foods produced by the Haitians are avocados, bananas, rice, sugar, and rum. The poverty in this country is profound. Our poverty-stricken are wealthy compared with those on Tortue. These people are lucky to have one snack a day such as an avocado. The people are 95% illiterate. They determine their age by which president was in office at the time of their birth.

This could narrow the time down to a six-month period, or with some presidents, it could give a 10- or 12-year period with which to work. Their religion is Voodoo and has no formal theology.

The second speaker spoke on Phenylketonuria. He defined it as a metabolic error which is hereditary, recessive, and causes brain damage. However, the mental deficiency it causes is preventable by early detection and proper diet. It occurs oftener in fair skinned, blue eyed, very blond children as it interferes with normal pigment formation. The brain is damaged so rapidly that literally every minute counts in diagnosing the disease. The child must be on formula for five days before PKU can be diagnosed. A serum test is now required by law on each newborn.

George R. Berch, of the American Hospital Association, spoke on Medicare. He outlined the bill covering Medicare and spoke especially of Title 19, which he said represents two-thirds of the money that will be spent, and Title 18, which is in two parts. Part A covers hospital insurance and Part B covers medical insurance.

The final speaker of the day was Joseph Fiadorel. He is a retired Chicago policeman with 27 years of service. He brought with him all types of narcotics and tools used by addicts when he spoke on the “Horrors of Drug Addiction.”

MEDICAL PROGRESS

(continued from page 781)

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RADIATION HAZARD AND RADIOLOGY IN THE OPERATING ROOM

I. E. Kirsh, M.D./Hines

BECAUSE THIS IS THE AGE of the electron, there have been important recent advances in Radiology, both as to technology and clinical uses of x-ray. These advances will continue. I predict that there will be increased exposure of operating room personnel to radiation in coming years.

I'd like to tell you about recent trends in radiology, as they may affect you in the field of anesthesia, and then we'll try to project these trends a few years into the future.

Right now, some diagnostic radiologic procedures to which you are exposed are: radiography of hips during pinning, or heads for ventriculograms and stereotaxis, abdomens for cholangiograms and missing surgical needles and angiograms of the head, heart and extremities. Therapeutic radiation is done with insertion of radium into the uterus, radon into the nodes of the neck and isotopes into the chest, abdomen or subcutaneous tissues.

The kinds of procedures which will increase in frequency are: cholangiography, which may become routine on all gall-bladder operations, angiocardiology and coronary arteriography. In therapy, I predict an increased number of uses for radio-isotopes to destroy tumors. The use of radium will probably decline or remain static.

The anesthesiologist has to be concerned with safety against explosions and stopping patients' breathing during radiographic exposure. Getting the patient to stop breathing for a few seconds is a simple thing for you to do, but it immobilizes you near the patient in the few seconds before the ex-

posure. The prevention of explosions is also easily taken care of. Gases which might explode are simply not used when there is a chance of x-ray being used. The x-ray machine, usually a mobile one, even though it be shock-proof, is not spark-proof, and the danger of sparks is to be allowed for.

This raises the question of what kind of x-ray machine will be used. In most cases, this is a mobile machine of low power, so that a long exposure time is necessary for thick parts, which may create a difficulty in the matter of patient's breathing. There is already available a large, high-output x-ray machine which can be installed in the operating room. This can be made spark-proof, by having the control-stand in an adjoining room. With its use an entirely satisfactory film can be made of any part of the body in a very short time. More and more new hospitals will have such a machine in the operating room, so as to produce high-quality work with short exposure. Another improvement which is already here, and will be used more and more, is rapid Polaroid development of x-rays. Instead of waiting 15 minutes or longer for a look at the x-ray, we can have an x-ray print in 1 minute, doing the processing in the corridor just outside the operating room, in the light. This has the further advantage that the special film is so sensitive that it takes only one-fourth the exposure of ordinary x-ray film.

Another new device we will be seeing in the operating room is closed-circuit viewing of x-ray films originating in the x-ray department. This device, now being made under the name Videoviewer will make it possible to see on a T.V. screen in the operating room any group of x-ray films

Chief, Department of Radiology, Hines Veterans Administration Hospital, Hines, Illinois

set up in the x-ray room, with commentary coming via intercom system.

Fluoroscopy in the operating room is rarely done and it has been condemned in the past because, with unshielded equipment there was excessive radiation. With the necessity of darkening the room, it was a great nuisance to the surgeons. Nowadays, with image-amplified fluoroscopy which can be done in a lighted room, we may quite possibly see an image amplifier combined with the high-powered x-ray machine installed in the operating room. This could have a cine attachment, which is very useful for angiography.

Finally, is the question of radiation-hazards. How much radiation do operating room personnel get, especially the anesthetist? Will it increase in the near future? And how much is too much?

To answer the last question, we should have a short survey of the subject. Ionizing radiation has been reaching our ancestors and us from the beginning of time. Cosmic radiation and naturally occurring radio-isotopes have probably been responsible for mutations and genetic changes which have been taking place all along. Experts think that there is no threshold, that is, a level of radiation which is entirely harmless. A level of radiation for the population as a whole which will increase mutations by only 25% we can tolerate, say geneticists, without seriously damaging the national germ-plasm. This amount of radiation is equivalent to an average population dose of 20 Rads before conception, that is, up to the age of 30 years. For people occupationally exposed to radiation, this may be 100 mR/wk. or 5 Rads/year, with the precaution that it not exceed 30 Rads by age 30 years. It must be remembered that the genetic effects are spread widely through the population, rather than being traceable to the immediate descendants of the exposed, because of the large number of generations necessary before a harmful mutation will become evident. This means that we need to consider the nation's germ-plasm in a general way, as it concerns the population, not from the point of view of the health of our own children.

In addition to the genetic effect of radiation, which gets less and less important as we specialists get older and older, we should consider briefly the somatic effects. Large amounts of radiation may cause blistering, ulceration, deep fibrosis, and after some delay, leukemia and cancer. Small amounts of radiation also may have harmful effects if administered over a long time. These include leukemia, and probably shortening of life-span, although there is some difference of opinion about the latter. Because there are these two kinds of effects of radiation, genetic and somatic, everyone exposed to it should be motivated to reduce it as much as possible.

Some ways to minimize radiation are: distance, collimation, and shorter and fewer x-ray examinations. Collimation means using restrictive cones and iris-diaphragms on the x-ray tube so as to give x-rays only where needed. Radiation varies inversely as the square of the distance, so that if you get twice as far from the source, the dose of radiation will be only a quarter what it was before. The other factor using shorter and fewer x-rays, will be beyond your control.

Some articles in the anesthesia journals tell of the experiences in regard to x-ray of some workers in the field of anesthesia. For example, Kincaid¹ of the Mayo Clinic found that at the anesthesiologist's chair the dose was 10 mR for a single angiocardigram, 18 mr for cardiac catheterization, and less than 5 mr for a cholangiogram or a hip-pinning operative procedure. And LeTard and Belleau² of the Ochsner Clinic, measuring by film badges the radiation collected by six Fellows in Anesthesiology for a whole year, found that the average radiation (for one year) was 200 mR. The maximum permissible dose is 100 mR/week, or 5 Rads/year, which is 25 times the average dose obtained by them. So that during that survey, the dose of radiation received by those anesthesiologists was well below the permissible level. This does not mean that all anesthesiologists everywhere are safe. Experience proves that the mere act of measuring radiation causes an automatic increase in watchfulness and safety measures. When precautions are not taken, and

personnel are not aware of dangers, excessive radiation may be present.

A table shows the figures which we found at our hospital, when our physicist measured the radiation which reached the position of the anesthesiologist when we gave a "phantom," or a manikin, x-rays just like those used during a hip-pinning procedure. You will see that the dose reaching the anesthesiologist is very much less when cones are used to limit the field. The figures shown are for one pair of films, AP and lateral. We know that on the average three such pairs are taken, and sometimes as many as five, so you will have to use that multiplication factor to determine your full dose and divide the permissible number of such examinations by the same factor. That is, if three pairs of x-rays are taken in a case, you are permitted to be present at 3 such examinations per week if cones are on the x-ray machine, but only one if no cones are there.*

In position two, we designate a surgeon with a question-mark, because our surgeons

always get out of the way when x-rays are taken (and the nurses scurry away even faster), but the figures show that if the surgeon does not move away, this is a rather unhealthy place to be.

Our survey tells me that at present the anesthesiologist does not have any undue risk of radiation damage, provided he and the radiologist take reasonable precautions. But he should watch out if in the future there is an increase in the number of x-ray procedures done, as is quite likely. What should he do about it then? Be aware of the existence of a problem and if in doubt, wear a radiation film badge.

*The dose received by the anesthesiologist was measured at table-top level, or at his waist. Two sensitive organs, the gonads and the eye, received the same dose when no cones are placed on the X-ray tube, but only 50% of this dose when cones are applied.

Acknowledgment: I thank Mr. William Rivkin, physicist at Hines V. A. Hospital, for his work in obtaining radiation measurements.

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RADIATION DURING X-RAY FOR HIP-PINNING
(for 1 AP and 1 lateral exposure)

Position of	Anesthesiologist		Surgeon (?)		X-Ray Technician
	mR/200 mas.	No. exams. permitted per week	mR/200 mas.	No. exams. permitted per week	mR/200 mas.
A. With Cones	0.98	10*	3.64	3*	0.57
B. Without Cones	2.55	4*	31.	less than 1*	1.1

* Based on maximum permissible exposure of 10 mr. per week for non-controlled personnel.
NOTE: in 2nd column, divide no. exams. permitted by 2 if 2 pairs of films are made during 1 examination, etc.

La Rabida Names Research Director

Dr. Raymond D. A. Peterson, an authority in the field of immunology, has been named Director of Research at the La Rabida-University of Chicago Institute and associate professor in the department of pediatrics at the University.

The new appointment was announced

jointly by Edward H. Levi, Provost of the University, and Ray F. Myers, President of the Board of Trustees of La Rabida.

Since 1963 Dr. Peterson has been an Assistant Professor of Pediatrics at the University of Minnesota. His research deals with immunology, the study of the body's reaction to foreign substances.

EDITORIALS



MERRY CHRISTMAS

CHRISTMAS IS LIKELY TO LOSE its traditional place in the minds and hearts of Christians if the holiday becomes more commercial than it is and so materialistic that it is no longer consistent with the teachings of Christ. This is important also to those of other faiths. We are living in a disruptive world and the symbol of universal brotherhood—the Golden Rule—and to love one's neighbor as oneself, should be upheld.

Christmas is a religious holiday. The Santa Claus ritual is of pagan origin and was celebrated by the Dutch on the eve of St. Nicholas' birthday (December sixth). In time the date was displaced to coincide with Christmas and the giving of gifts became part of the Yuletide festivities.

The original Dutch St. Nicholas ritual included giving presents such as a toy, knife, shoe, cooking utensil, or something to wear made by the giver. Included also was a poem that was written by the giver. In other words, the present came from the heart and was a token of mutual sympathy and empathy.¹

Many of us have forgotten that the highest act of giving is loving. We refer to mature love that is given with no strings attached and no quest for return in kind. Many adults are not prepared for this type

of love because they did not get enough affection in their childhood. The need for love and affection should be stressed by all physicians to improve mental health and the happiness of our patients.

T. R. Van Dellen, M.D.

YEARS LOST

THE DEATH CERTIFICATE rarely receives the thought it requires unless the physician is interested and convinced that it is worthwhile. Most of us never hear about the information derived from these certificates except in complicated records and charts that are published a year or two later.

Vital statistics go into computers but the results are only so accurate as the intelligence and integrity of those who feed the material. It is easy to transpose figures and dates. In some areas the cause of death is coded in accordance with the International Classification of Diseases. These data are recorded on punch cards, placed on magnetic tapes, and fed into computers. Each task increases the chance of errors.

1. Meerloo, Joost A. M., Santa Claus and the Psychology of Giving. *American Practitioner & Digest of Treatment* (Dec.) 1960.

In the past, Australian deaths were reported in the form of numbers and proportions of deaths due to particular causes, or in tables of death rates. They concluded that the information was of limited value because it did not take into account the age and life expectancy at the time of death. Everyone will die eventually but it is more practical and important to determine the causes of death especially in the prime of life. The Australians counteracted this by calculating "the years of life lost," that is, the years of normal life expectancy at the age of death. This gave them some information on the relative importance of various causes of death to the nation. In time they decided that more accurate information could be obtained by calculating the years of working life lost from particular causes.

Working life was defined arbitrarily as the 50-year period from the fifteenth to the sixty-fifth birthday. When the statistics were finally compiled more than two-thirds of the deaths were represented by the following groups: 1) accidents, poisoning, and violence; 2) certain diseases of early infancy; 3) diseases of the circulatory system; and 4) neoplasms.

The results of this novel plan are not impressive. Deaths from accidents are more common in the younger age group which in turn accounts for the highest loss of years of working life. The same applies to diseases of early infancy even though the number dying may not be so great. Circulatory disorders cause more than 40 per cent of the deaths but when calculated in this way account for only 15 per cent of the lost years of working life. The situation is somewhat the same in regard to cancer.

Death at any age is regrettable but when viewed from the angle of the lost years it may help the public to change their patterns of behavior. The infant who dies never has lived; the teenager and young adult have the most to live for, yet they take the greatest risks; the middle-aged person who succumbs to heart disease or cancer dies in the prime of life. The older has lived, which in itself, is worth following the rules of health and correcting the high risk factors that contribute to heart attacks.

T. R. Van Dellen, M.D.

EARLY VS. LATE FEEDINGS OF INFANTS OF LOW BIRTH WEIGHT

TWO IMPORTANT STUDIES have appeared which may aid the physician in treating hypoglycemia and hyperbilirubinemia in the newborn period.

In a controlled study of early vs. late feedings of infants of low birth weight 1250-2000 grams, Dr. Paul Y. K. Wu and his group¹ at Michael Reese Hospital, have found significant differences in the mean concentrations of serum bilirubin and blood glucose. The early fed group of premature infants was given a modified milk formula containing 20 calories per ounce starting at two hours of age. The late fed group was given a similar formula at 24 hours of age.

The late fed group had significantly higher mean serum bilirubin concentrations than the early fed group at 96 and 120 hours of age. The infants in the late group

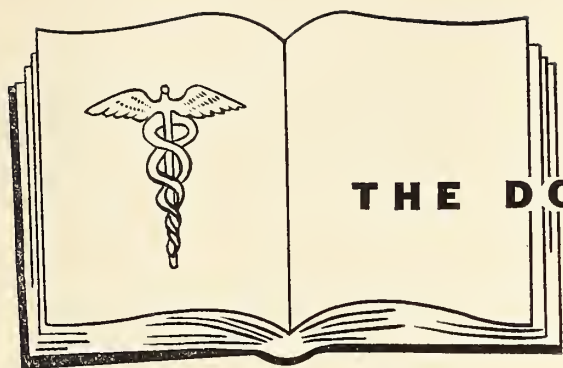
had significantly lower mean concentrations of blood glucose at 24 hours of age.

Similar findings were reported by Wennberg and his group,² in infants between 1750-2400 grams. The mean concentrations of blood glucose were significantly lower and the serum bilirubin concentrations were significantly higher in a group of infants fasted for 48 hours, than infants fed early on glucose containing fluids.

In both studies there was a significantly lower degree of weight loss observed in the late fed group.

Further work must be done to determine the quality and quantity of early feedings and the optimal time and route of introduction of fluids in infants of low birth weight.

(continued on page 826)



THE DOCTOR'S LIBRARY

IT ALL GOT STARTED WITH HIPPOCRATES.

Richard Armour, with illustrations by Campbell Grant. New York: McGraw-Hill Book Co., 1966. \$3.95

This is a different history of medicine that is written by a Ph.D. who can afford to be completely uninhibited. The book is amusing and a cartoon style illustration brightens almost every page. There are 16 chapters dealing with medicine as practiced in prehistoric times, among the early and late Greeks, the Romans, Arabians, Renaissance, and other periods in history. The grain of truth prevails throughout the book but it was written mainly for laughs and not to prepare the reader for an examination in medical history.

T. R. Van Dellen, M.D.

RADIOGRAPHIC ATLAS OF THE GENITO-URINARY SYSTEM, by Charles Ney, M.D., and Richard M. Friedenberg, M.D. 741 pages 1,661 Figures $8\frac{5}{8} \times 11\frac{1}{4}$. Publication date June 17, 1966. Price \$36.00—Lippincott

The authors' approach to the radiographic study of genito-urinary disease is to be commended. The use of the atlas form to demonstrate the highlights in X-ray diagnosis filled a void in the field. Large amounts of material are covered in outline form with copious illustrations of excellent quality in conjunction with the text material. The authors have included all of the latest material reported in the recent radiological and urological literature. Most previous books on genito-urinary radiology separated the various components of a specific disease entity with a section on excretory urography, retrograde studies and angiography. To give a more uniform picture the authors have avoided this pitfall by showing all types of available radiographic material in each area under study.

I would highly recommend this book to all residents and practitioners in the field of radiology and urology.

Leon Love, M.D.

ZONE MENTAL HEALTH CENTERS, John P. Reidy. Charles C Thomas, Springfield, 1964

This compact volume presents in most interesting fashion the Illinois concept of zone mental health centers as the keystones to full development of community services. It gives the reader a brief history showing how Illinois came to the point of change and clearly shows the extensive effort that went into planning. By succinctly taking the reader step by step through the planning phases and by using a variety of short quotations from mental health experts, the author clearly shows the logical development of the zone concept and the first steps in implementation.

For these phases this book could serve as a guide that any state with similarly inadequate resources and traditional practices would take at this time of public concern and interest.

One finds the first five of the six chapters almost deceptive in the apparent ease of the growth of the Illinois concept and its early steps in implementation. The architectural phase is developed in detail dramatically demonstrating the variety of structural designs, which are viewed as furthering the zone concept with maximum flexibility for program development. This portion alone should be valuable to others involved in planning.

By a sprinkling of carefully chosen quotations, the essence of the thoughts of national leaders is brought to bear on the key questions relative to expanding the concept during the planning stage. Throughout, the guidance and vision of Dr. Francis Gerty and his successor as Director of the Department of Mental Health, Dr. Harold Visotsky, is highlighted by excerpts from talks and by quotations from letters and documents from the files of the Department of Mental Health. The reader sees the growth of the concept of placement of services to be accessible to communities, of comprehensiveness in the variety of services available at the centers, of emphasis upon out-patient services, and of coordination with related and supporting services.

In the last chapter, the challenges of the future are presented with stress on staffing, financing and public acceptance. Plans for smoothing the road to community participation and involvement, to support by money and complementary local services and to securing outstanding staff are discussed with full recognition of the difficulties to be faced.

This book presents so clearly the first phases of a dynamic and imaginative program that one looks forward to a later publication indicating the effective solutions to the problems expected, the modifications that may have been necessary and a further elaboration of the Illinois concept in its functioning phases.

D. F. Rawlings

A MANUAL OF TROPICAL MEDICINE. George W. Hunter, III, Ph.D., Col. U. S. A. (Ret.); William W. Frye, Ph.D., M.D., and J. Clyde Swartzwelder, Ph.D. Fourth Edition, W. B. Saunders Co., Philadelphia, 1966, \$18.50

This book is dedicated to "All those persons who are concerned with the Health, Welfare and Control of Disease among the citizenry of countries in the tropics, subtropics, and temperate zones." It is now in its fourth edition, and the authors have continued to improve and update the vast material covered in the book. It is a manual aimed at students and written in a style that covers the subject in a minimum of space with a maximum number of illustrations and pictures. There are 37 contributors in addition to the three main authors. It must be seen to be appreciated.

T. R. Van Dellen, M.D.

OCULAR PHARMACOLOGY by William H. Havener, M.D., M.S. 456 pages. The Mosby Co., St. Louis, Mo., 1966. \$21.75

This fine book on ocular pharmacology is a current review, written in a fresh personal manner by an ophthalmologist with a first-hand knowledge of everything he describes. It is not another routine categorized therapeutic volume with just newer drugs added. On the contrary, major medications are presented in detail of physiologic background, animal research study, and indications and means of administration.

It is refreshing to see the author, who is a professor of ophthalmology at Ohio State University, make clean stands of choice as to medications, with their scientific justification. The author gently repeats important points that merit emphasis, as the preference for minimal effective strength of all local injectable anesthetics; the importance of repeated release of bulbar pressure during retrobulbar anesthesia to guard against retinal circulatory embarrassment, and the folly of considering every minor syncopal sign of a locally-anesthetized patient as evidence of a drug-toxicity reaction.

The work is illustrated with the right number of well-chosen charts and diagrams. Each major paragraph is labelled to show its chief content.

This pharmacology book is eminently recommended for inclusion in the library of every ophthalmologist and of the medical student who plans on an ophthalmic career.

Jack P. Cowen, M.D.

AMA — ERF Raises Interest Rate on Loans

By means of this special message to all medical society executive secretaries, the American Medical Association on Nov. 4 announced new terms and rates of interest for AMA-ERF loans.

"For the past four and a half years, the AMA Education and Research Foundation has been operating a program which guarantees bank loans to those in medical training. More than 30,000 loans, over \$35,000,000 in principal amount have been made to borrowers who needed additional funds for essential living and training expenses.

"We are proud of the fact that no legitimate request for loan funds has been turned down. We feel that this program has played an important part in helping young people overcome financial obstacles

which otherwise may have proved insurmountable.

"During the past year the availability of money for loans of all kinds has declined sharply. Many economists have tried to pinpoint the cause of the shortage of credit. The consensus is that the economy cannot absorb the combined impact of a large domestic welfare program and a war.

"This combination of economic pressures has created a shortage of money, and has forced the banking system to raise the cost of funds (interest rates) and curtail lending. Because of this general curtailment of loans, two of the three banks in the AMA-ERF Loan Guarantee Program have terminated their agreements to lend money through the program. The third bank, Con-

(continued on page 804)

THE PRESIDENT'S PAGE

(continued from page 752)

the senior year—only about 30 are under this program. This means that there are not more than five to seven students graduating each year to go into rural areas in the state of Illinois. This, of course, is not sufficient. The possibilities are, too, that some of these students, after they have graduated and have taken their internship, may decide not to abide by their agreement to practice in these rural areas. So that all-in-all, while it is a good program, nevertheless it is not sufficient.

Maybe a big factor in the lack of doctors in the rural areas is that many of our students are not imbued or indoctrinated in the spirit of the family physician. The doctor in the rural area must be a family physician. We, therefore, must train more of our students in the medical schools to become family physicians. In 1930 about 85% of the U.S. physicians were known to be general practitioners. Today their number has shrunk to about 35%. About 18% of this year's medical graduates expect to go into general practice. Now what is the cause for this drop in the general practice men? What is the reason? The reasons are many.

1. The curriculum at the medical schools in most instances is directed toward specialization. I believe that this thinking is faulty. We must try to educate more family physicians. We must try to make this the primary object of medical education.

2. I believe that the course in medical education is too long. I would favor that the pre-medical education should consist of only two years and that the four-year medical course should be cut down to three years. The fourth year or the senior year in medicine should consist of an internship. This not only will help the graduate to round himself out in the general practice, but it also will give an opportunity to the smaller hospitals to obtain interns in their area. After this one year of rotating internship, there should be a two-year course of postgraduate education or residency for the

family physician to train him in the different fields such as surgery, medicine, obstetrics, gynecology, psychiatry, etc.

We must impress these students that the family physician is the one who is the backbone of the health of this nation. The family physician is the one that should treat the family from the cradle to the grave, if you please. We must impress them that general practice is the romance of the art and practice of medicine. I recall my days of general practice. I've enjoyed those days very much. The satisfaction of bringing a child into this world and then to treat this baby—which now is called the specialty—pediatrics. I had the occasion thereafter to treat the members of the family; the mother, the father, the grandparents. Yes, I was their medical advisor. I was their psychiatrist. I was their consultant. I was the spiritual advisor, marriage counselor. All these things are the basis of good family medical care.

This does not mean that we do not need specialists. Of course we do. Specialists are needed in the many areas where the general physician is not trained very much. When the general physician, or the so-called family physician has to do a surgical procedure that is beyond his ability, he should seek the help and the aid of the super-specialist. But, by and large, he should be trained in doing the average type of surgery. He should be given permission to do this in his hospital. He should have more privileges than he is getting now.

You and I know that the general practitioner is not treated well in the average hospital. He is not given the privileges that he is entitled to as a doctor. I see no reason why any man who has graduated from a medical school and has had an internship and some postgraduate training should not be permitted to do the things that he feels that he is competent in doing. Of course, there should be supervision. Of course, there must be some form of evaluation of a man's ability. But, by and large, many of these doctors who have had good training or preceptorship with other men

are able to do as good work as many specialists.

I would encourage men to go into general practice. I would encourage men to become family physicians. I would give them the recognition that they deserve. I would certainly give them all the rights and the same privileges in the hospital as the specialists. They should be able to become heads of departments. They should become

chiefs of staff. They should be able to get the recognition that the other men are getting and so become recognized by the patient.

Time will come when the American family doctor of tomorrow will be more highly thought of than his predecessor. He will have more responsibilities and he will have a higher status.

Some "Questions and Answers" About the Health Careers Council of Illinois Development Program

What Is the Health Careers Council of Illinois?

The Health Careers Council of Illinois is a voluntary association composed of Illinois state organizations of the health professions and major employers of health personnel. The Council was organized and developed to seek means of solving present and future shortages of health personnel through unified action, eliminating wasteful duplication of effort in some fields and the lack of any effort in others.

Why Is It Necessary to Have a Fund-Raising Campaign?

Present income from the member organizations is not sufficient to finance the broad program needed to solve this health manpower problem. Therefore it is the aim of this development program to not only increase the budget for operating procedures but also to broaden the base from which the Health Careers Council can draw not only its finances but also its future leadership.

What Is Planned as a Result of this Campaign?

Since its inception, the Health Careers Council of Illinois has, out of necessity, limited itself primarily to the field of recruitment and career exploration. However, studies indicate that as important as this field is, the complete solution to the problem lies in research and educational development. Therefore, to continue with recruitment and to enlarge the program to cover research and educational development will require more funds than it is possible to raise from the member associations.

How Much Is Needed to Implement the Program?

It is estimated that a minimum of \$150,000 a year or a total of \$450,000 over the next three years will be needed to make this program possible. This amount does not include certain foundation and government grants for special projects. This is only an administrative and program budget.

How Will the Money Be Raised?

People such as yourself acquainting other people with the need is the only way a campaign can succeed. It is felt that once people realize the need they will make the sacrifices necessary to see this program move forward so that our ill and injured might continue to receive that excellent care so necessary to their well being.

How Much Should I Give?

Only you can answer this question. It is hoped that when you realize the need you will be as generous as possible. Certainly many gifts in the amount of \$300, \$500, \$1,000 and even more per year are going to be necessary if we are to achieve success.

Why the Emphasis on a Three Year Program?

It is difficult for individuals and some public concerns to commit the sums of money necessary from "out-of-pocket" funds. However, by spreading the payments over a three year period it will work a hardship on none and all can participate.

Are Gifts to Health Careers Council of Illinois Tax Deductible?

Yes. The Internal Revenue Service has ruled that contributions to the Health Careers Council of Illinois are deductible up to 30% of an individual's adjusted gross income and up to 5% of a corporation's net taxable income.

Can I Make a Gift in Other Than Cash?

Yes. Substantial tax savings can be realized through gifts of property such as securities or common stocks that have appreciated in value. Should you desire to make your gift in this manner, it is suggested that you counsel with your tax adviser about planning your gift for maximum tax advantages.

How Are Subscriptions Paid?

The donor may determine the method which best suits his particular situation. Gifts may be made quarterly, semi-annually, annually or in any other manner which the donor may determine.

THE VIEW BOX

DIAGNOSIS AND DISCUSSION

(Continued from page 766)

Diagnosis: Intraduodenal Abscess.

A barium enema reveals compression of the ascending colon toward the midline. There is displacement of small bowel loops inferiorly. An irregular large radiolucent zone is seen at the site of bowel compression. This represents extra-luminal gas produced in a large abscess. Extra-luminal localized gas may be due to three causes:

- (1) Exogenous—comprising those which arise from air entering the peritoneal cavity through a sinus tract surgical

incision, or due to penetrating wound.

- (2) Endogenous—including those which arise from gas escaping from a hollow viscus.
- (3) Bacteriogenic—in which the gas results from breakdown of devitalized tissue as a result of gas producing bacteria such as *E. Coli*, aerobacter aerogene and *Cl. Welchii*.

500 cc of pus was evacuated from an abscess which extended to the abdominal wall and undoubtedly represented infection at the site of paracentesis.



Wide-range bactericidal action for genitourinary infections

NEW OMNIPEN[®] (AMPICILLIN) WYETH

A penicillin that exhibits effectiveness within the gram-positive spectrum of penicillin G* and the gram-negative spectrum of chloramphenicol and the tetracyclines.*

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Normally produces high and persistent levels in blood and high concentrations in bile and urine.

Significant inherent stability.

**Exclusive of penicillinase-producing bacteria.*

Indications: Urinary tract infections, especially those caused by *E. coli*, *Proteus mirabilis*, and *Streptococcus faecalis* and *viridans*; respiratory infections caused by *H. influenzae*, pneumococci, streptococci, and nonpenicillinase-producing staphylococci; and gastrointestinal infections caused by *Shigella* and *Salmonella*, including *Sal. typhosa*.



Contraindications: Hypersensitivity to penicillin; infections due to penicillinase-producing staphylococci and other penicillinase-producing bacteria.

Precautions: If allergic reaction occurs, discontinue ampicillin and administer epinephrine, corticosteroids, antihistamines and/or pressor amines as indicated. Transient moderate

elevation of SGOT values of undetermined significance was noted in a few infants. Liver and kidney function as well as hematopoietic tests are advisable during therapy, particularly in infants. As with other antibiotics, precautions should be taken against gastrointestinal superinfection. Safety for use in pregnancy has not been established.

Adverse Reactions: Occasional mild side effects as urticaria, skin rash, pruritus, diarrhea, nausea and vomiting. There have been no reports of blood dyscrasias, liver or kidney damage. Anaphylaxis has been reported.

Composition: Capsules, 250 mg.
**American Hospital Formulary
Service Category No. 8:12.16.**

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AMA-ERF

(continued from page 796)

tinental Illinois National Bank and Trust Company of Chicago, has stated that it must limit aggregate new loans to the amount being repaid on outstanding loans.

"It is therefore with sincere regret that we now inform you that the AMA-ERF Board of Directors, meeting on October 28, was forced to curtail the loan guarantee program for a temporary but indefinite period.

"Effective November 1, loans under this program must be limited to \$750 per borrower per year. This step was necessary in order to spread the limited available funds as far as possible.

"In addition, the interim interest rate will be increased from 6 percent to 7 percent. The new rate reflects recent increases in the bank prime rate, now at 6 percent, and our contract with the bank requires this adjustment."

Drug Research Costs at New High

More than a million dollars is spent every day by the pharmaceutical industry to discover and develop new prescription drugs, according to a survey conducted by the Pharmaceutical Manufacturers Association.

The rate, which was reached for the first time early this year, is now considered a conservative estimate by PMA officials. The survey shows that nearly \$400 million will actually be expended in 1966.

Last year industry-financed research and development expenditures exceeded \$350 million.

"So costly is industry research and development," explained PMA president C. Joseph Stetler in announcing the results of the survey, "that on the average more than \$5 million in such costs has been spent for each new drug discovery of the past decade."

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DOSAGE: 1 tablet daily, usually at 10 a.m.

SUPPLIED: Bottles of 50 and 250 on prescription only.

CAUTION: Obedrin-LA should not be given concurrently with monoamine oxidase inhibitors. It should be used with caution in patients having a sensitivity to sympathomi-

metic compounds or barbiturates and in cases of coronary or cardiovascular disease or severe hypertension. Excessive use of amphetamines by unstable individuals has been reported to result in a psychological dependence. In such instances, withdrawal of the medication is necessary. All medication should be used with caution in pregnant patients, especially in the first trimester.

Obedrin®-LA*

"TRICKLE-RELEASE" TABLETS

Each tablet contains: Methamphetamine HCl*, 12.5 mg.; Pentobarbital*, 50 mg. (Barbituric Acid derivative; Warning: May be habit forming), Ascorbic Acid, 200 mg.; Thiamine Mononitrate, 1 mg.; Riboflavin, 2 mg.; Niacin, 10 mg. *U.S. Pat. Nos. 2,736,682; 2,809,916; 2,809,917; 2,809,918 and pat. pend.

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NATIONAL HEALTH LEGISLATION

(continued from page 756)

committee reached agreement on such legislation shortly before adjournment last year, but it was too late to get it through Congress.

One of the final pieces of legislation passed by Congress in 1966 authorizes liberalization of the Keogh law under which physicians get a tax break for savings put in qualified pension plans. The full amount of the \$2,500 annual maximum was made tax deductible. Only half of the amount was tax deductible under the original law.

Other health legislation approved by Congress in 1966 includes:

Group practice—authorizes federal mortgage guarantees for construction of non-profit group practice facilities.

Health services—authorizes the Office of Economic Opportunity (antipoverty) to make grants for comprehensive health services programs, including birth control.

the readjustment center

A residential facility for junior and senior high school males who need psychiatric help with problems of academic underachievement and attendance, or difficulties in family-school-social adjustments. Complete academic and therapy program for grades seven through twelve.

Dr. Arnold H. Kambly, Medical Director

For information contact:
Rita Burgett, Secretary
Box 373, Ann Arbor, Mich.
Phone: (AC 313) 663-5522

Public health—authorizes 1) \$145 million, one-year extension of PHS programs, including \$125 million for project grants for categorical programs. States and the PHS are given greater flexibility in spending the money among the various categories and including other "public health" projects; 2) extends the federal-aid vaccination program for three years; 3) provides for family health services for migratory workers.

Air pollution—authorizes a three-year, \$186 million extension of the federal anti-air pollution program and provides broader authority for air pollution control activities by localities.

Water pollution—authorizes a \$3.7 billion, four-year program for cleaning the nation's waterways. It includes initiation of a massive program for combatting pollution in major water basins.

Child care—prohibits sale of toys containing hazardous substances and strengthens existing law covering household hazardous substances; does not contain a disputed provision covering children's aspirin and other drug controls in the original legislation.

Narcotics—permits addicts charged with non-violent crimes to choose hospital commitment instead of trial, if the authorities agree, or could be sentenced after trial to hospitals for rehabilitation.

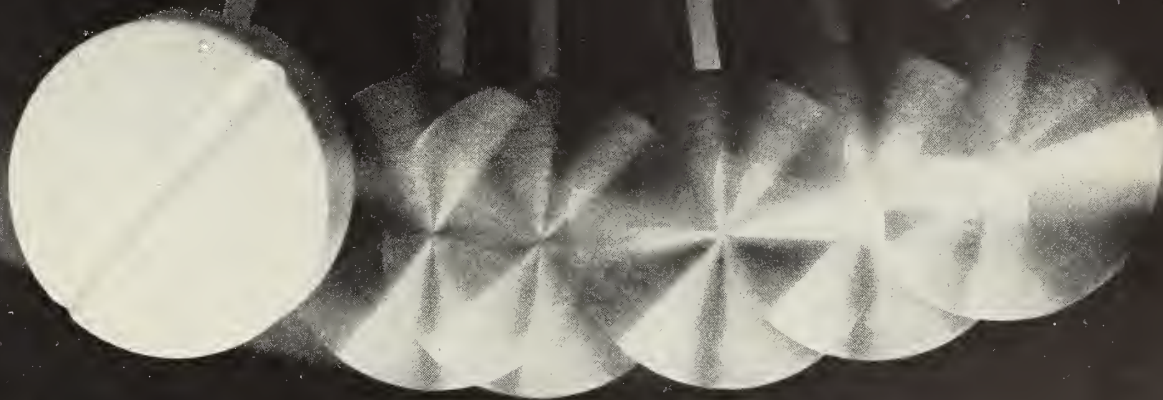
Packaging—requires that over-the-counter drugs and grocery products bear labels clearly showing the contents, quantity, and manufacturer.

Mental health—amends original law to provide grants to assist in the establishment and initial operation of community mental health centers.



Research laboratory animals—provides for federal regulations covering transportation, purchase, sale, housing, care, handling and treatment of such animals.

Military medicare—amends existing law to provide for out-patient care in a physician's office and to include retired reservists and their dependents.

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generally well tolerated, Percodan may cause nausea, emesis or constipation in some patients. Percodan should be used with caution in patients with known idiosyncrasies to aspirin or phenacetin, and in those with blood dyscrasias. *Literature on request.*

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Rise In Bootleg Drugs Seen

Prohibition-style racketeers, scenting millions of dollars in bootleg drugs, are beginning to invade the prescription drug market under cover of pressure for lower prices, according to Lyman C. Duncan, chairman of the Pharmaceutical Manufacturers Association.

A rising tide of "bootleg drugs" could impose a task on Food and Drug Administration agents as difficult as that of revenue agents searching for bootleg stills in Prohibition days, Mr. Duncan warned at the October annual meeting of the National Association of Retail Druggists.

He said the protection once afforded doctors and their patients by the manufacturer's name on his products was "in danger of being demolished" by governmental action to promote the use of unbranded, and presumably cheaper, drugs.

In the past, Mr. Duncan said, the chief requirement of an FDA inspector was technical knowledge of pharmaceutical products

and manufacturing processes. The reliance on manufacturers' integrity "made it possible to police this vast industry successfully with a mere handful of technically-oriented FDA inspectors."

Now, with FDA's assignment of policing the potency, purity and safety of drugs, and the advent of "bootleggers," Mr. Duncan went on, the agency will require "pistol-packing investigators skilled in underworld procedures." He said they will have to search for the illicit and shady operators turning out complex and dangerous drugs in the industrial fringes of New Jersey and the outskirts of major cities such as Chicago and Detroit.

Mr. Duncan told the assemblage of retail pharmacists, "The illicit industry is still relatively small but the important thing is the seeds have been sown and the method of operation established. Their mushrooming growth only awaits the opening up of the vast new market which the campaign for generic prescribing will provide."



11:47 pm



11:53 pm



12:06 am

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by Paul deHaen

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Manufacturer: The Upjohn Company

Composition: Each 5 cc. contains: Lincomycin Base250 mg.

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Dosage: Children (over 1 month of age): 15 mg./lb./day to 30 mg./lb./day, three or four times a day or as directed.

Adults: 500 mg. three or four times a day, or as indicated.

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Manufacturer: Bristol Laboratories

Composition: Each 5 ml.:

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Nystatin125,000 u.

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Dosage: Adults: Usual dose 1 Gm. per day in four divided doses of 250 mg. each, or as indicated.

Children: Usual dose 25 mg./kg./day in four divided doses, or as indicated.

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Corticoid Spray (Pressurized Spray) R

Manufacturer: Merck Sharp & Dohme

Composition: Dexamethasone Sodium Phosphate equivalent to Dexamethasone 21-Phosphate 18mg. or Dexamethasone 15 mg.

Indications: Nasal conditions having an allergic or inflammatory component, such as allergic rhinitis (including hay fever) and nasal polyposis.

Dosage: Adults: 2 sprays in each nostril, two or three times a day.

Children: 1 or 2 sprays in each nostril two times a day depending on age.

Supplied as: Pressurized containers.

PTZ ELIXIR Convulsant R

Manufacturer: The Brown Pharmaceutical Co.

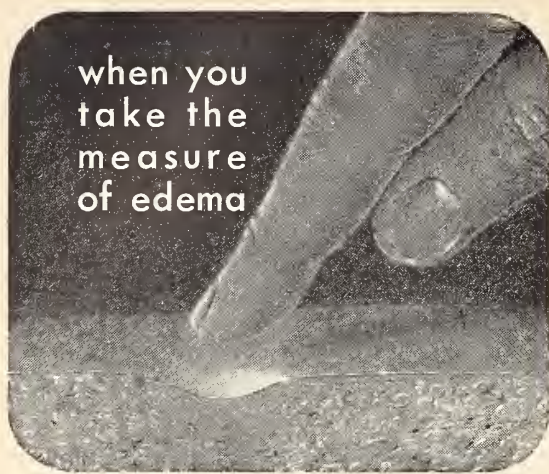
Nonproprietary Name: Penlyenetetrazol

Indications: Central nervous system stimulant.

Dosage: As indicated

Supplied as: Elixir. Bottles of 16 oz.

Effects and adverse reactions: The transitory drowsiness which occurs with hydroxyzine HCl usually disappears spontaneously within a few days with continued therapy, or is correctable by dosage reduction. Dryness of the mouth may be seen with higher doses. Transitory motor activity, including rare instances of tremor and convulsions, has been reported, usually on higher than recommended dosage. **Hydroxyzine HCl may potentiate barbiturates, narcotics such as meperidine, and other CNS depressants.** In consequence, dosage for these drugs should be decreased as much as possible. Because drowsiness may occur, patients should be cautioned against driving a car or operating dangerous machinery. **Parenteral Solution Precautions and contraindications:** This dosage form is intended only for I.M. or I.V. administration and should not, under any circumstances, be injected subcutaneously or intra-arterially. When the usual precautions for I.M. injection have been followed, reports of soft tissue reactions have been rare. When used intravenously, if given undiluted, minimal amounts of hemolysis (2-3 grams of liberated hemoglobin) will occur. If diluted with 50 cc. of normal saline and given during a period of 15 minutes or more, this phenomenon does not occur. Due to the rapid, and infrequent phlebitis, the rate of injection must not exceed 25 mg. per minute. A single I.V. administration in excess of 1 g. is not recommended. Particular care should be used in the administration of injection only into intact veins; a few instances of digital necrosis occurring distal to the injection site have been attributed to inadvertent intra-arterial injection or periaxillary extravasation, both of which should be avoided. **Use in Pregnancy:** When administered to rats at high dosage, hydroxyzine induced fetal abnormalities. Until human clinical data are available adequate to establish safety in early pregnancy, hydroxyzine is contraindicated in early pregnancy.



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DOSAGE: Diuresis, initially 50 to 200 mg., maintenance 25 to 150 mg., daily. Hypertension 50 to 100 mg. initially, adjusted to 50 mg. T.i.d. or downward to minimal effective dosage level.

WARNINGS: Use with caution in the presence of renal disease as azotemia may be precipitated or increased. In patients with advanced hepatic disease, electrolyte imbalance may result in hepatic coma. Dosage of coadministered antihypertensive agents should be reduced by at least 50%. In cases of suspected electrolyte imbalance, serum electrolyte determinations should be performed and imbalance, if any, corrected. Stenosis or ulcer of small intestine have been reported with coated potassium formulas, and surgery has been required and deaths have occurred. Based on surveys of both United States and foreign physicians, incidence of these lesions is low and a causal relationship in man has not been definitely established. Until further experience has been obtained, the use of the drug in pregnant patients should be weighed against possible hazards to the fetus.

CONTRAINDICATIONS: AQUATAG (benzthiazide) is contraindicated in progressive renal disease or dysfunction including increasing oliguria and azotemia. Continued administration of this drug is contraindicated in patients who show no response to its diuretic or antihypertensive properties. Severe hepatic disease is a relative contraindication. (See "Warnings" above.)

PRECAUTIONS AND SIDE EFFECTS: Electrolyte imbalance with hypokalemia (digitalis toxicity may be precipitated), hypochloremic alkalosis and hyponatremia may occur. Patients with cirrhosis should be observed for impending hepatic coma and hypokalemia. Other reactions may include blood dyscrasias, hyperuricemia and gout, nausea, jaundice, anorexia, vomiting, diarrhea, dizziness, paresthesia, photosensitivity and headache. Hepatic fetor, tremor, confusion and drowsiness are signs of impending pre coma and coma in patients with cirrhosis. Insulin requirements may be altered in diabetes. AQUATAG (benzthiazide) should be used with caution, post-operatively as hypokalemia is not uncommon. Potassium supplementation may be advisable pre- and post-operatively. There have been occasional reports of thrombocytopenia, leukopenia, agranulocytosis, aplastic anemia and precipitation of acute pancreatitis or jaundice.

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Colorado Winter Clinics

The Colorado Winter Clinics will be held at the Brown Palace Hotel in Denver Tuesday through Friday, Feb. 28-Mar. 3. Scientific programs are planned each afternoon. Dr. Joseph Butterfield, program chairman, announces that the Yampa Valley Mail train leaves Union Station daily at 9:05 a.m. for skiing at Winter Park, Col., for those who wish to attend scientific meetings one day and ski another.

The Feb. 28 program will feature Intrauterine Transfusion and the Fetus, with Dr. Alvin Zipursky of the University of Manitoba and Dr. Richard Bashore of the University of California Center for Health Sciences participating. The Mar. 1 program will cover Surgery of the Heart; the Mar. 2 program will feature the Airway, and the Mar. 3 program, Hypertension.

Luncheons are scheduled daily at such places as Your Father's Moustache in historic Larimer Square. Tuesday the program

will discuss "The Look Ahead." Wednesday's luncheon will cover government medical problems. Thursday has been set aside for the COMPAC organization to hold its semi-annual luncheon. Friday a panel of journalists will discuss the "Image of Medicine."

Scientific and technical exhibits at the Brown Palace Hotel will contribute to the scientific aspects of the meeting, for which the registration fee for all doctors is \$10.

Additional details about the meeting and a ski vacation in Colorado may be obtained by writing the Colorado Medical Society, 1809 E. 18th Ave., Denver, Col. 80218. Hotel reservations may be obtained by writing to the Brown Palace Hotel, referring to planned attendance at the Colorado Winter Clinics. "Colorado Skiing," with information on resorts, services and transportation may be obtained by writing the Colorado Visitors Bureau, 225 W. Colfax, Denver.

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The following is a brief precautionary statement. Before prescribing, the physician should be familiar with the complete prescribing information in **SK&F** literature or *PDR*.

Precautions: Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Do not use in patients taking MAO inhibitors. Excessive use of the amphetamines by unstable individuals may result in a psychological dependence; in these instances, withdraw the medication. Use cautiously in pregnant patients, especially in the first trimester. *Side effects:* Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.



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OBITUARIES

Frank W. Brodrick*, Sterling, died October 22, aged 94. Graduate of the University of Illinois College of Medicine, 1897. Doctor Brodrick studied diseases of eye, ear, nose and throat at universities and hospitals in Vienna, Paris, London, Edinburgh, Budapest, Zurich and Utrecht. He was certified by the American Board of Ophthalmology and the American Board of Otolaryngology. Doctor Brodrick was a member of the ISMS Fifty-Year Club and the American Academy of Ophthalmology and Otolaryngology.

Robert N. Crow*, Chicago, died November 6, at the age of 70. Doctor Crow graduated from the University of Illinois College of Medicine in 1925 and practiced medicine for more than 40 years in Chicago.

Nello M. Felicelli, Chicago, died October 15, aged 59. Doctor Felicelli was a graduate of the Stritch School of Medicine of Loyola University in 1935. He specialized in Obstetrics and Gynecology and was a member of the American Society of Abdominal Surgeons.

Paul Haas*, Chicago, died August 17, at the age of 65. Doctor Haas was born in Vienna, Austria and graduated from the University of Vienna Medical School in 1926. He practiced in Illinois from 1940 to 1962, when he retired.

W. Lloyd Kenny*, died November 6, aged 67. A graduate of the University of Illinois College of Medicine in 1926, Doctor Kenny practiced medicine in Illinois for more than 20 years, specializing in colon and rectal surgery.

John J. Kerwin*, died October 22 at Miami, aged 83. Doctor Kerwin graduated from Northwestern

University and practiced medicine in Chicago for more than 50 years. He was associated with Mercy Hospital and the old German Deaconess Hospital. Doctor Kerwin became a member of the ISMS Fifty-Year Club in 1958.

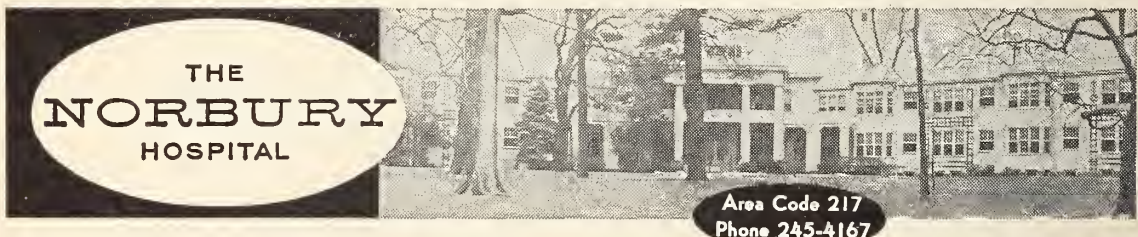
Harold J. Koch*, died September 2 at the age of 57. A graduate of the University of Illinois College of Medicine in 1936, Doctor Koch was certified by the American Board of Ophthalmology and a member of the American Academy of Ophthalmology and Otolaryngology and the American College of Surgeons. He was a senior staff member at Christ Community Hospital, Oak Lawn, and Evangelical Hospital in Chicago.

Donald G. Mershon*, died October 21, aged 62. Doctor Mershon graduated from the University of Illinois College of Medicine in 1930. He was a member of the American Academy of General Practice.

Louis J. Miller*, died November 10, at the age of 67. A graduate of the Stritch School of Medicine of Loyola University in 1933, Doctor Miller specialized in pulmonary diseases. He was chief surgeon of the United States Army Surgical Section in the European theater of operations during the 2nd World War and later a member of the medical staff of Mt. Sinai Hospital. Doctor Miller was a member of the International College of Surgeons, the American College of Chest Physicians, and the Industrial Medical Association.

Anthony A. Montvid, Chicago, died September 28 at the age of 80. Doctor Montvid graduated from the Stritch School of Medicine of Loyola University in 1917. He specialized in Internal Medicine.

**Indicates member of Illinois State Medical Society.*



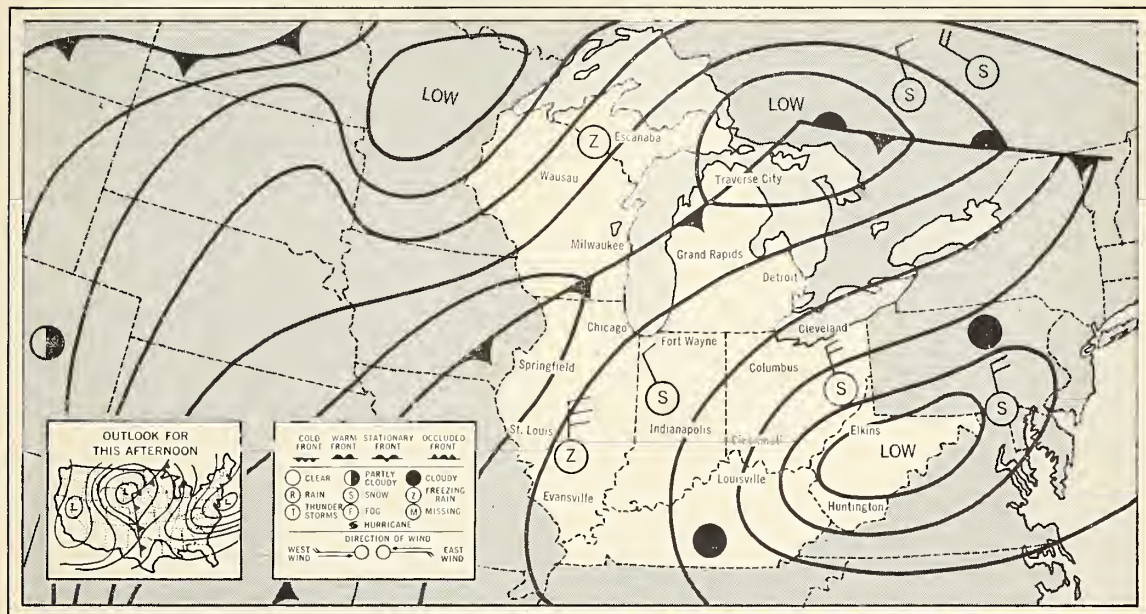
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EDITORIAL

(continued from page 794)

Infants in respiratory distress should be given intravenous fluids containing glucose in the first 24 hours. Early oral feedings should be avoided in these cases.

It appears that the withholding of fluids for 24 to 72 hours in infants of low birth weight can no longer be justified.

Harvey Kravitz, M.D.

References

1. Wu, P. Y. K.; Tellmann, P.; Gabler, M.; and Metcalf, J.; "Early" Versus "Late" Feeding of Low Birth Weight Neonates. Effects on Serum Bilirubin, Blood Sugar, and Responses to Glucocorticoid and Epinephrine Tolerance Tests. *Pediatrics* (in press).
2. Wennberg, R. P.; Schwartz, R.; and Sweet, A. Y.; Early Versus Delay Feedings of Low Birth Weight Infants: Effects on Physiologic Jaundice. *Journal of Pediatrics*, 68; 860, 1966.

Course in Internal Medicine

The Northwestern University Medical Center and Passavant Memorial Hospital will again present in January a postgraduate course in internal medicine entitled, "The Year in Internal Medicine." The course will be given at the Offield Auditorium at Passavant Memorial Hospital, Jan. 26, 27 and 28. Subjects will include topics of current interest in pharmacology, gastroenterology, endocrinology and metabolism, hematology, pulmonary disease and cardiology. Guest faculty will include Dr. Carl V. Moore, St. Louis, Mo.; Dr. Robert A. Good, Minneapolis, Minn., and Dr. W. H. Summerskill of Rochester, Minn. Dr. J. Scott Butterworth, New York will give a special talk and demonstration on auscultation of the heart. Registration is limited. For information, address "The Year in Internal Medicine," Passavant Memorial Hospital, 303 East Superior St., Chicago, 60611.

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Appointment

Samuel L. Andelman, M.D., M.P.H., Commissioner of Health for the City of Chicago, has been named a member of the National Medical Advisory Committee of the Medic Alert Foundation.

Dr. Andelman is Clinical Associate in Preventive Medicine at the University of Illinois and has been a member of the American Board of Preventive Medicine for many years.

The appointment was announced by Dr. Marion Collins, of Turlock, California, president and founder of the nonprofit, charitable international foundation.

Medic Alert provides more than 160,000 members around the world with a medical identification emblem to warn emergency personnel that its wearer has a hidden medical problem. The face of the emblem is emblazoned with the medical Caduceus and the words, "Medic Alert." On the reverse is engraved an identification serial number, the telephone number of Medic

Alert's Central Registry, and the wearer's special problem, such as "Allergie to Penicillin" or "Diabetes." In case of emergency the additional information in the member's file is available to authorized persons on a collect call basis.

Dr. Andelman, in accepting the unsalaried position with Medic Alert, reports President Collins, joins a list of distinguished physicians on the committee.

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January Clinics for Crippled Children

Twenty-three clinics for Illinois' physically handicapped children have been scheduled for January by the University of Illinois, Division of Services for Crippled Children. The division will count 18 general clinics providing diagnostic orthopedic, pediatric, speech and hearing examination along with medical, social, and nursing service. There will be three special clinics for children with cardiac conditions and rheumatic fever, and two for children with cerebral palsy. Clinicians are selected from among private physicians who are certified Board members. Any private physician may refer to or bring to a convenient clinic any child or children for whom he may want examination or consultative services.

Jan. 4, Hinsdale—Hinsdale Sanitarium; Jan. 5, Flora—Clay County Hospital; Jan. 5, Peoria Cerebral Palsy (half day)—Roosevelt School; Jan. 5, Cairo—Public Health Building; Jan. 5, Sterling—Com-

munity General Hospital; Jan. 10, East St. Louis—Christian Welfare Hospital; Jan. 10, Quincy—St. Mary's Hospital; Jan. 10, Peoria General—Children's Hospital; Jan. 11, Champaign-Urbana—McKinley Hospital; Jan. 11, Joliet—Silver Cross Hospital; Jan. 12, Springfield General—St. John's Hospital; Jan. 12, Rockford—Rockford Memorial Hospital; Jan. 13, Chicago Heights Cardiac—St. James Hospital; Jan. 24, East St. Louis—Christian Welfare Hospital; Jan. 24, Peoria—Children's Hospital; Jan. 25, Centralia—St. Mary's Hospital; Jan. 25, Springfield Cerebral Palsy—Memorial Hospital; Jan. 25, Mt. Vernon—Good Samaritan Hospital; Jan. 25, Elgin—Sherman Hospital; Jan. 25, Evergreen Park—Little Company of Mary Hospital; Jan. 26, Effingham Rheumatic Fever & Cardiac—St. Anthony Memorial Hospital; Jan. 26, Decatur—Decatur and Macon Co. Hospital; Jan. 27, Chicago Heights Cardiac—St. James Hospital.

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